VOL. 87 NO. 6



# textile bulletin

JUNE • 1961





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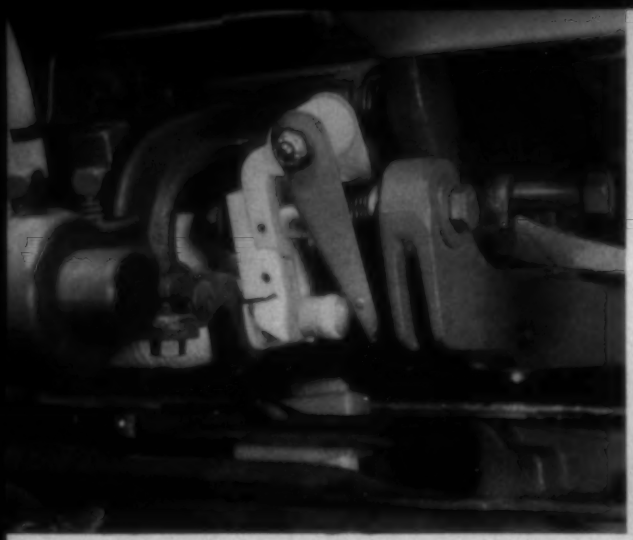
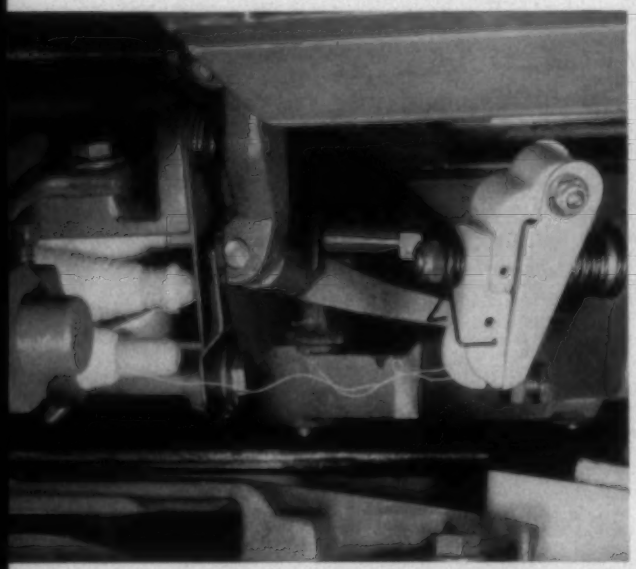


▲ EXTRACTOR HEAD ASSEMBLY MECHANICALLY
▼ EXTRACTS AND HOLDS THE TIP BUNCH.



## New reasons why . . .

# the Draper Automatic Filling Magazine offers greater mill savings

The Draper Automatic Filling Magazine with a new cam operated pivoting extractor and mechanical thread clearer eliminates the need for a vacuum system to clear the thread and the tip bunch of the incoming bobbin after transfer. This new construction reduces mill installation time and cost . . . simplifies maintenance . . . and improves cloth quality. *Consult your Draper representative for details on this and other advantages of the Draper Automatic Filling Magazine.*

**DRAPER CORPORATION**

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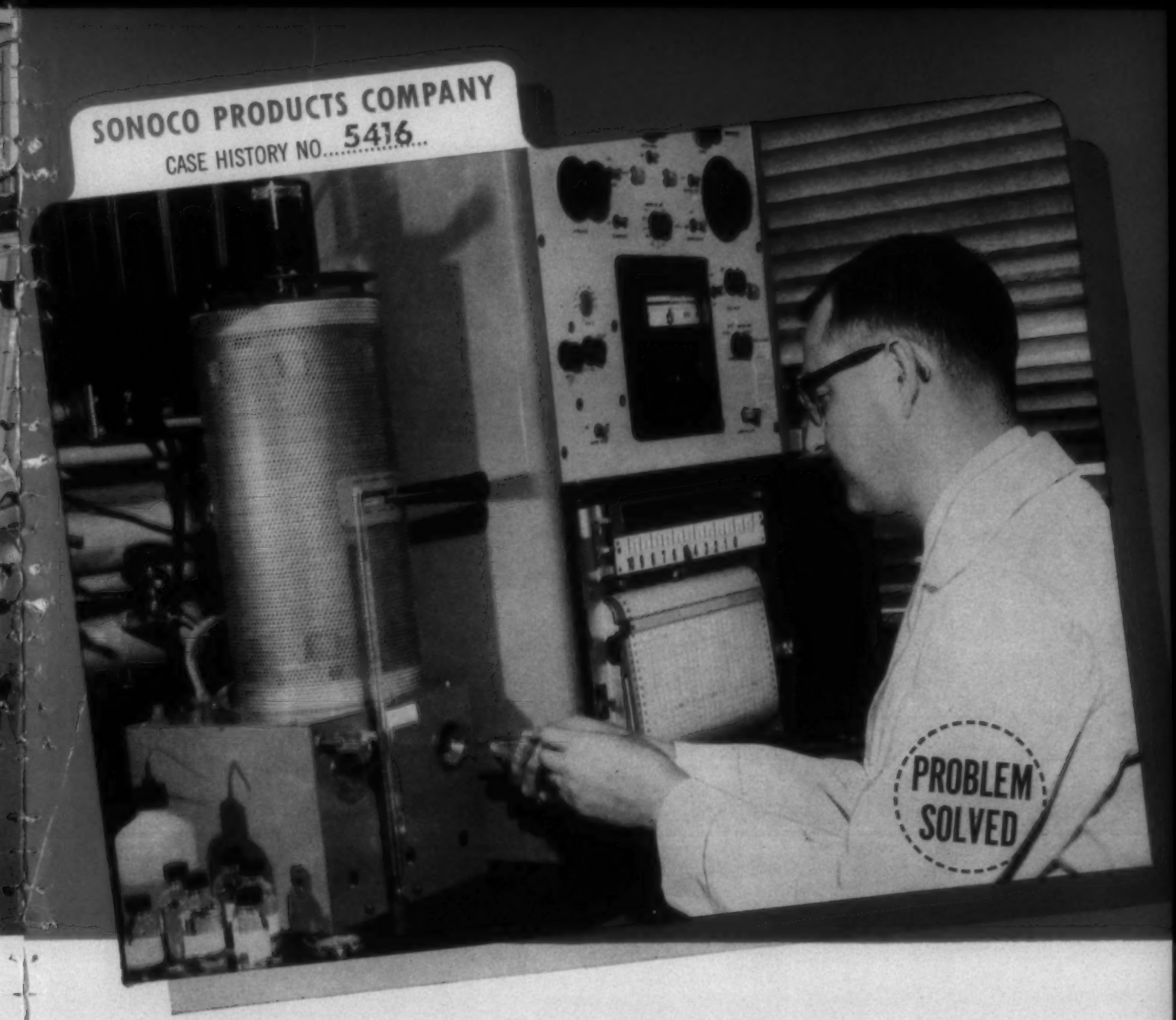


# PROBLEM: Streaks in finished cloth

The cloth was woven from a blend of acetate and viscose rayon yarn. The streaking resulted from the acetate having an affinity for viscose dyes. Tests showed a slight akaline condition on the surface of the tube used as a carrier for the acetate yarn. This was the cause of the trouble.

Sonoco then developed tubes having surfaces within the neutral range. These carriers had no effect on the yarn and the streaking problem was eliminated.

Technical service of this type is an added benefit when you buy from Sonoco. *Only Sonoco,* in its field, provides the continuous research, product development and integrated manufacturing needed to meet the ever-changing techniques of the textile industry. *Let Sonoco's more than 60 years' experience help you!*

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*Products for Textiles*

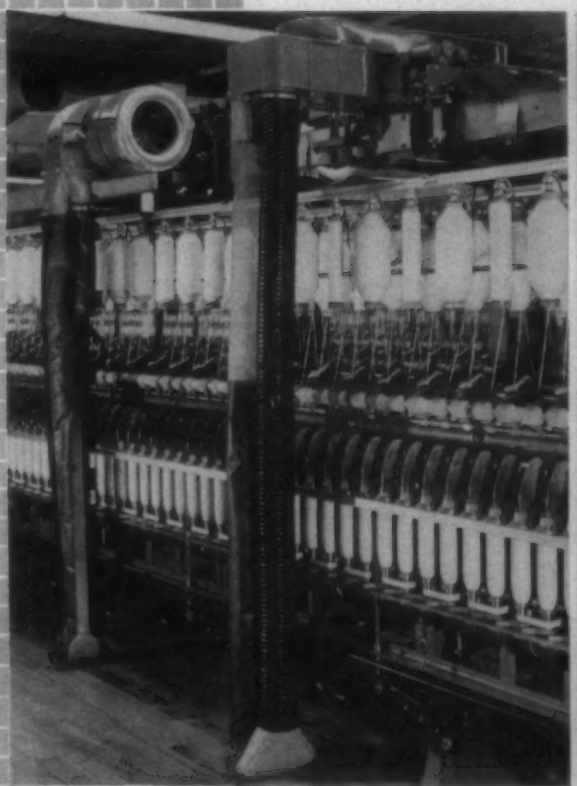
**SONOCO PRODUCTS COMPANY, HARTSVILLE, SOUTH CAROLINA** • Mystic, Conn. • Akron, Ind. • Ravenna, Ohio • Lowell, Mass. • Holyoke, Mass. • Phillipsburg, N.J. • Longview, Texas • Philadelphia, Pa. • La Puente, Calif. • Fremont, Calif. • Atlanta, Ga. • Richmond, Va. • **MEXICO:** Mexico, D.F. • **CANADA:** Brantford, Ont. • Granby, Quebec

**For: Roving • Spinning • Twisting**
**Winding • Spooling • Weaving**
**And other textile machinery**
***plus* specialized ceiling cleaning.**

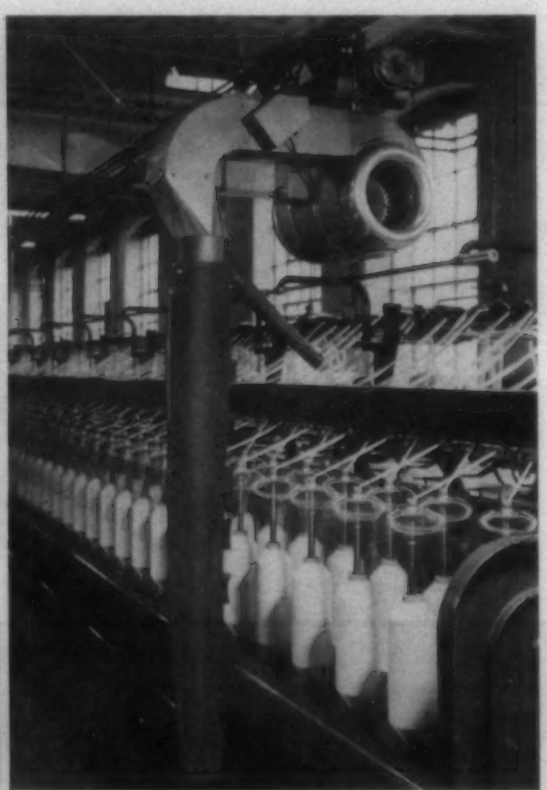
# Bahnson TRAVELING CLEANERS

**Have *Specialized Features* and *Custom Engineering* to provide maximum cleaning efficiency in specific mill areas**

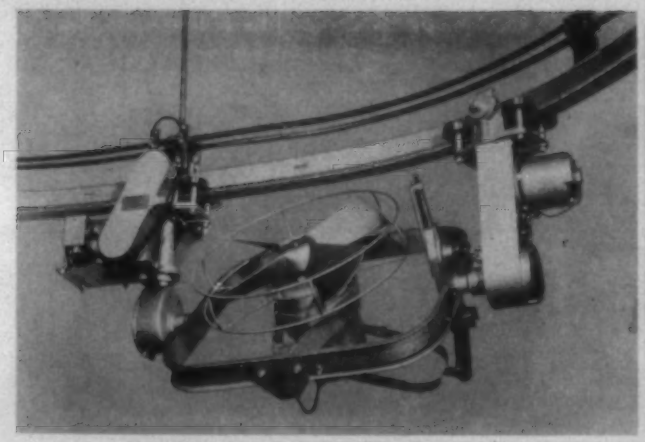
Bahnson's complete line of cleaners fits modern textile processing requirements. Individually designed to do a specialized job in the particular area where it is installed, each Bahnson Cleaner has proven efficiency in use. Each operates automatically to cut manual cleaning and improve production quality resulting in considerably reduced costs. Complete data on each cleaner is available in informative, illustrated bulletins. Write us for details on all Bahnson Cleaners or the individual cleaner of interest to you.



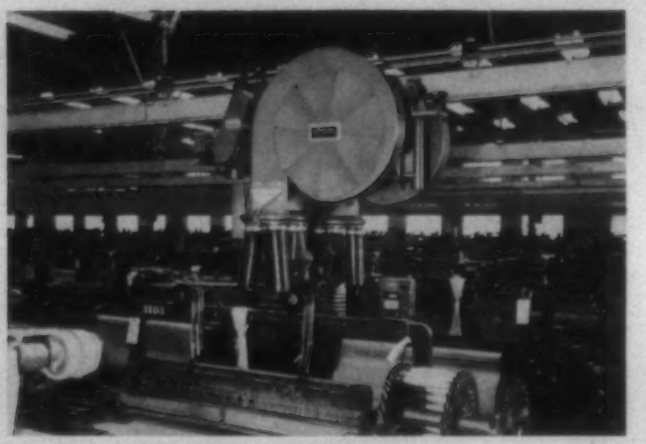
For Cleaner Floors:
**Vacu-Pak** Traveling Floor Sweeper
Write for Catalog 33-A



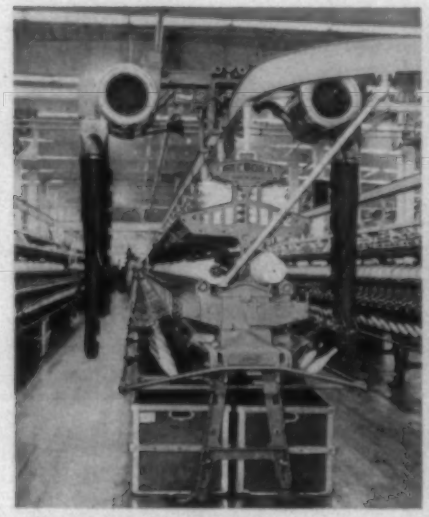
For Roving Frames:
**Rov-Aire** Traveling Cleaner
Write for Catalog 35-A



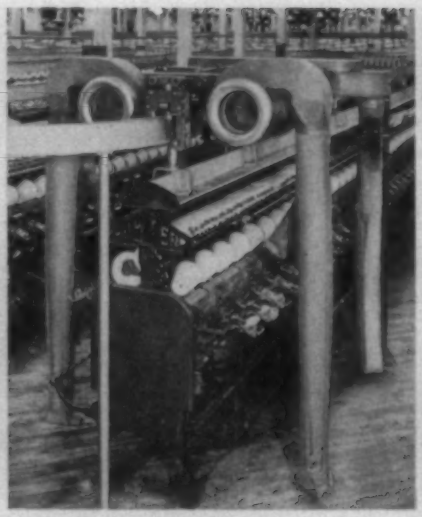
For Ceilings, Walls, Overhead Areas:
**Aero-Sweep** Traveling Cleaner
Write for Catalog 21-A



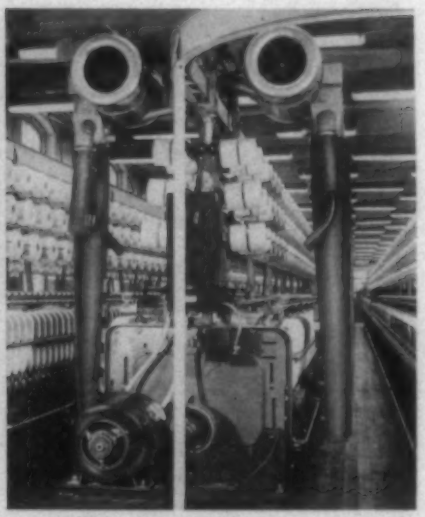
For Looms and Weave Rooms:
**Duo-Blast** Traveling Cleaner
Write for Catalog 37-A



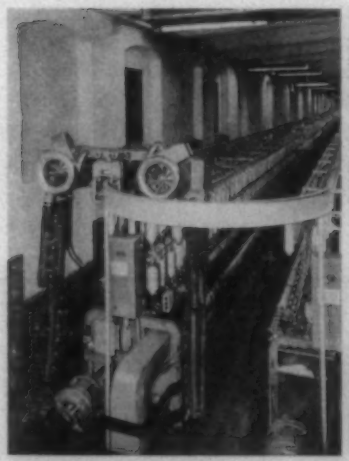
For Leesona Winders:
**Cross-Jet** Traveling Cleaner
Write for Catalog 32-A



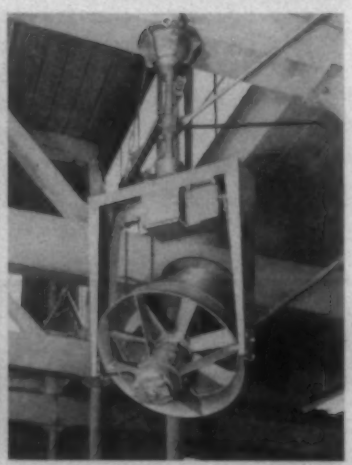
For Foster #102 Winders:
**Cross-Jet** Traveling Cleaner
and **Vacu-Pak** Floor Sweeper
Write for Catalogs 32-A and 33-A



For Twisting Frames:
**Cross-Jet** Traveling Cleaner
Write for Catalog 32-A



For Spinning Frames:
**Cross-Jet** Traveling Cleaner
Write for Catalog 32-A



For Fixed Overhead Cleaning:
**Circulaire** Overhead Cleaner
Write for Catalog 34-A

Bahnson

AIR-O-MATION

THE BAHNSON COMPANY

WINSTON-SALEM, N. C., U. S. A.

# Men who think BIG

## choose the WHITIN COMMODORE® Twister

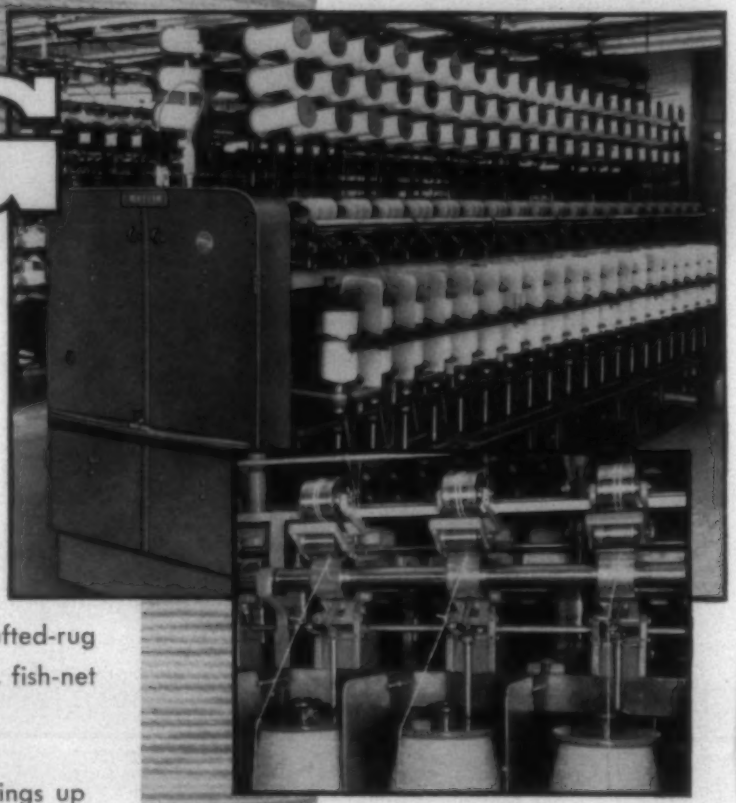
**The COMMODORE is designed to do just one job — heavy-duty, coarse yarn twisting, and to do it more *profitably* for you.**

The COMMODORE is ideal for twisting a wide variety of plied, heavy and coarse yarns such as tufted-rug yarns, carpet yarns, duck, tire cord, fish-net cord and paper.

* * * * * * * * *

With a 12" traverse and giant rings up to 8½" in diameter set in heavy steel ring rails, it is capable of processing yarns as coarse as 45,000 denier on packages holding as much as 11.0 lbs. of yarn. The COMMODORE has a rugged, solidly-built frame — a frame that can carry its tremendous loads without flinching. It is liberally equipped with anti-friction bearings, has precision-cut gearing and a sturdy pulley-type tape drive. Extra heavy ball bearing spindles mounted in cast iron spindle rails easily rotate these heavy packages at speeds reaching 4000 R.P.M.

A Big Twister to do a Big job — with all the advantages of **big, Big, BIG** packages.



Of particular interest to woolen yarn and carpet mills is the famous Whitin selective-type trap motion. It is available as optional equipment and can accommodate up to 6 ends. Proven on scores of installations, it has established an industry-wide reputation for efficient, positive and trouble-free operation.

WHITIN

*Write Today for Descriptive Folder*

# WHITIN MACHINE WORKS

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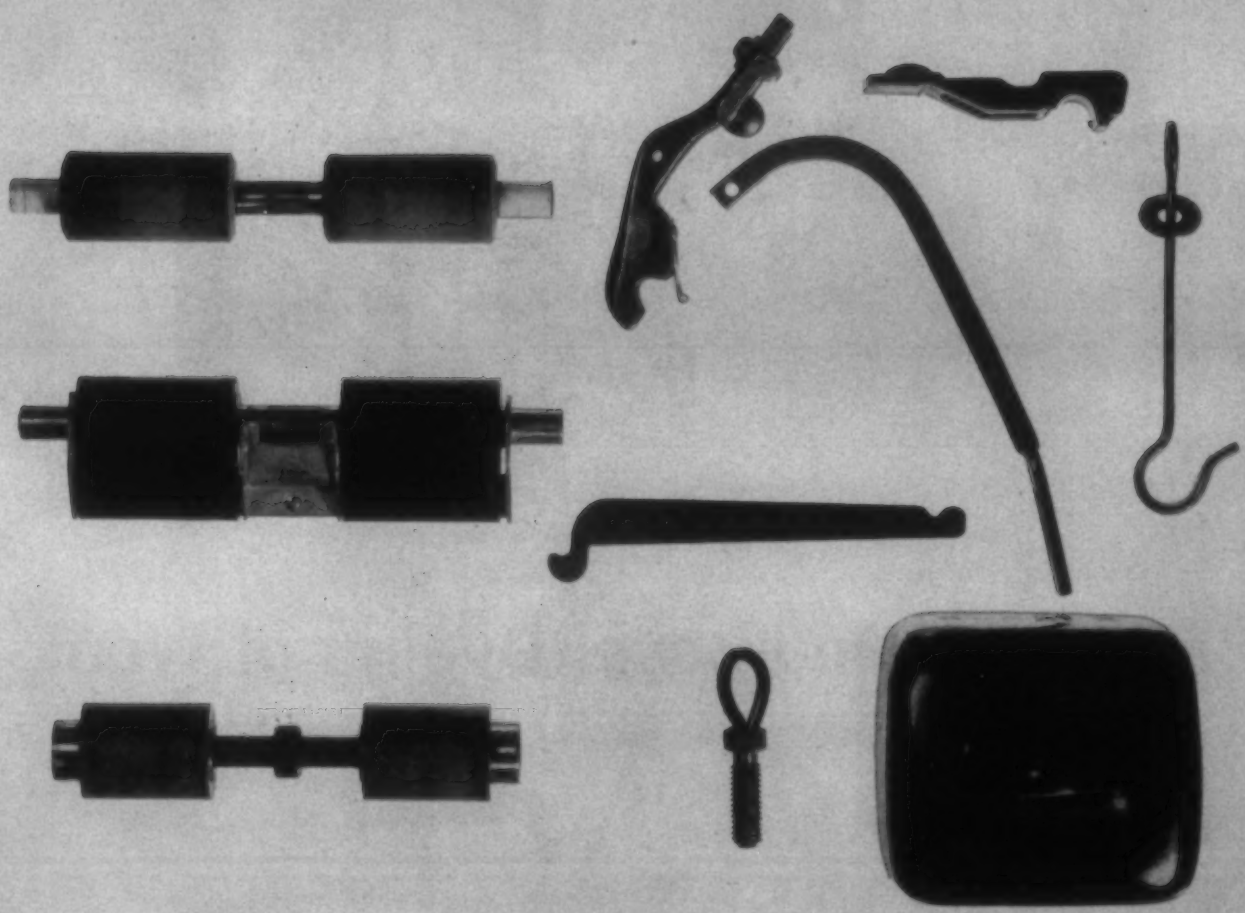
# Which is easier to care for...



# This...

## 3500 less parts to oil, clean, maintain when you switch to MagneDraft Spinning Frames

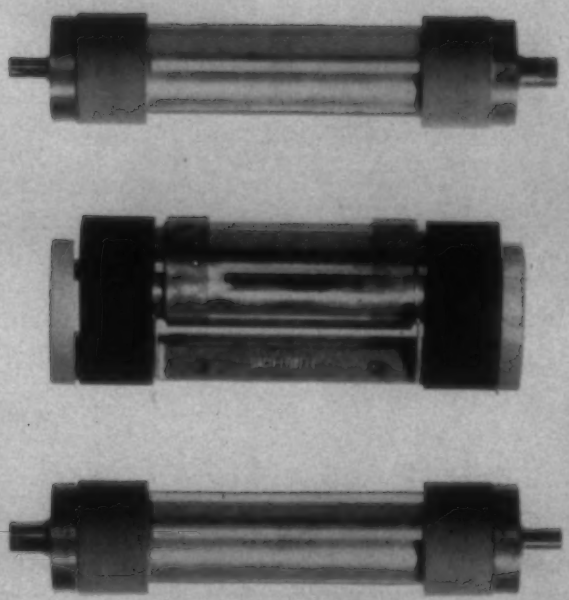
Saco-Lowell's MagneDraft* spinning system lets you replace the complicated and cumbersome drafting of conventional systems, shown above at left, with the simple 3-piece assembly, above next page.

MagneDraft's simplicity results from unvarying magnetic forces. Saddles, stirrups, levers, hooks and springs or weights are dispensed with entirely, for 7 less parts per 2 spindles... 3500 fewer parts per 1000 spindles.

With no lubrication required in the drafting zone, MagneDraft spins cleaner. Parts that do require cleaning are easily reached — for a savings, in all, of 60 to 90% of normal cleaning time.

Like all Saco-Lowell products, MagneDraft spinning systems have these two important plus values for you:

**Built for Better Performance.** MagneDraft creates a positive nip. The squeezing action between top and bottom rolls eliminates deflection of the bottom rolls.



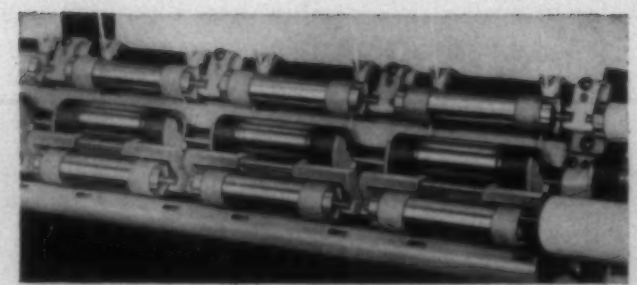
# Or This?

**Backed by Better Service.** A staff of specially trained consultants is available to help you in planning your MagneDraft installation or change-over... to provide any data or assistance you may wish.

Already in use in mills everywhere, MagneDraft is preferred by mill personnel at every level... proving once more that in textiles, as in other fields, the simplest answer is often the best.

*U.S. Patent Number 2,686,940.

For reprints of an actual mill report on MagneDraft performance, with statistical tabulations, write Saco-Lowell Shops, Textile Machinery Division, Greenville, S. C. Or contact the Saco-Lowell sales office nearest you.



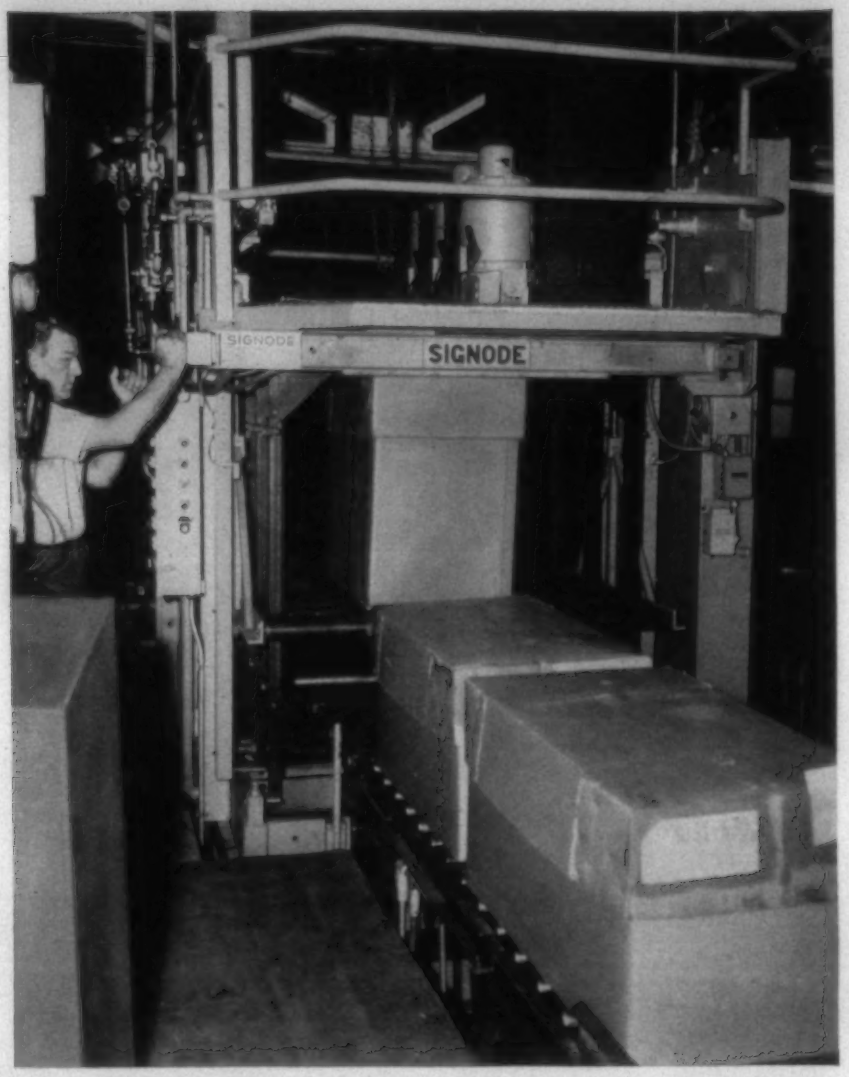
New Model MagneDraft, shown above, wins praise for the convenient end-around piecing its top front roll support permits. Available also in standard model without this feature.

**SACO-LOWELL SHOPS**

**TEXTILE MACHINERY DIVISION**

EXECUTIVE AND SALES OFFICES, GREENVILLE, S. C.

BRANCH SALES OFFICES: ATLANTA, GA., CHARLOTTE AND GREENSBORO, N. C., GREENVILLE, S. C., AND SACO, MAINE.




***One man weighs, marks and straps a volume flow of textile cartons***

# with a Signode Texomatic CSM

With a Signode Texomatic compression strapping machine, this operator weighs, marks and straps a mixed flow of cartons as they move from the textile production line. At the push of a button, the Texomatic CSM automatically lifts to compress the load, then feeds, tensions, seals and severs one, two, or three straps simultaneously in about 12 seconds. This gives the operator sufficient time to weigh and mark the cartons without interrupting their flow, and permits maximum savings in time, effort, and attention.

The new Texomatic is powered by three superbly-engineered M-20 heads with the known ability to operate continuously without attention through a million cycles or more. The M-20 strapping units are simply designed, easily accessible, and powerful enough to prevent overloading at fast speeds and high tensions. The sturdy, rugged, rack and pinion gear assembly gives positive action in raising and lowering; construction of the Texomatic is greatly simplified through the "lift to compress" action.

Let an experienced Signode man help you select the Texomatic compression strapping machine that meets your particular requirements. Write:

SIGNODE

*First in steel strapping*

**SIGNODE**
**STEEL STRAPPING CO.**
**2665 N. Western Avenue • Chicago 47, Illinois**
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## GDC DYES FOR ACRYLICS

tailored to fit the requirements of fiber, fabric, and wearer

Free-knit or full-fashioned, shaggy or smooth, cardigan or pullover, sports or dress wear—sweaters at their colorful best are dyed with GDC dyes.

Acrilan,[1] Creslan,[2] Orlon,[3] Zefran[4]—whatever your acrylic fiber—there is a range of GDC dyes that are just right for creating fashion shades with eye appeal and highest fastness to light, washing, perspiration, and drycleaning.

Genacryl,® Celliton,® Supralan,® Palatine®—remember these names for acrylic-fiber dyeing, for good fiber affinity in a broad range of bright, well-penetrated, level and economical fashion shades dyed by simple methods.

For acrylic sweater fashions in color—ask GDC.

Acrylic fiber of: (1) Chemstrand Corporation, (2) American Cyanamid Company, (3) E. I. du Pont de Nemours & Co. (Inc.), (4) Dow Chemical Company.

For complete information, call our Technical Service Department nearest you or write to:

gdc gaf

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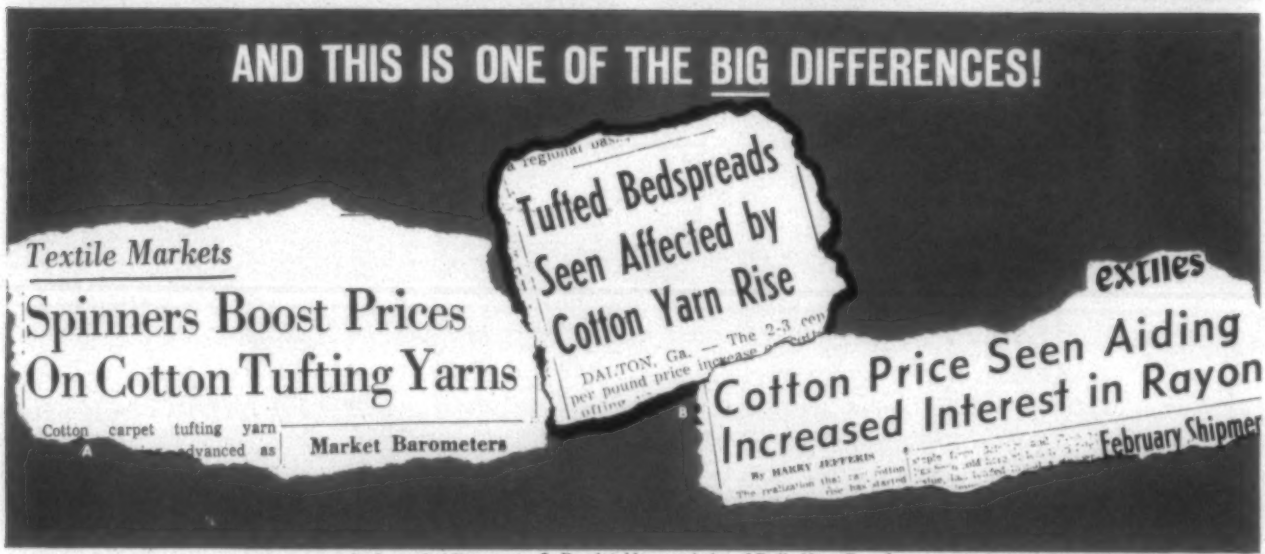
IN CANADA: CHEMICAL DEVELOPMENTS OF CANADA, LTD., MONTREAL






A. *Journal of Commerce* B. *Reprinted by permission of Daily News Record, copyrighted, 1961, Fairchild Publications, Inc.*

AS THE cost of cotton tufting yarns go up, major bedspread manufacturers are switching to chenille yarns made of ENKA's new Skybloom. This extra high-crimp rayon offers relative price stability—PLUS matchless uniformity in quality, less fallout, no waste, whiter goods, truer dyeing, styling versatility.

That's why leading manufacturers can continue to turn out fine quality, highly styled chenille spreads *at popular prices*. So if *you* haven't tried Enka Skybloom chenille yarn—check on it today. Contact Enka Merchandising in New York at 350 Fifth Avenue, PE 6-2300 or the District Sales Office nearest you for a list of Skybloom yarn spinners.

**Retailers:** Write or call Enka Merchandising (address above) for the names of manufacturers who are featuring the Enka Skybloom label.

So many good things begin with

ENKA Skybloom™ RAYON FIBER

American ENKA Corporation, Enka, N. C. • Producer of nylon • rayon • yarns • fibers

NEW YORK OFFICE: 350 Fifth Ave., New York 1, N. Y. • DISTRICT SALES OFFICES: Greensboro • Providence


- QUALITY
- PRICE
- DELIVERY

**only Vic gives you all three...** orders on stocked sizes received by 4:30 P. M. are shipped the same day. Metallurgical tests show Victor Travelers to be superior in precision, polish, shape and size. Better than the rest but priced competitively, Victor Ring Travelers are definitely your most economical buy.

***Victor Ring Travelers***

**SACO-LOWELL SHOPS**

REPLACEMENT PARTS DIVISION

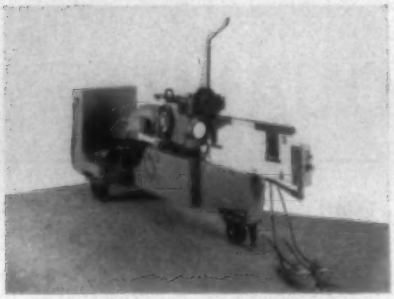
EXECUTIVE AND SALES OFFICES, GREENVILLE, S. C.

BRANCH SALES OFFICES: ATLANTA, GA., CHARLOTTE AND GREENSBORO, N. C., GREENVILLE, S. C., AND SACO, MAINE.

# For The Textile Industry's Use

– NEW MACHINERY, EQUIPMENT AND SUPPLIES –

## Power Strapping Machine



The M20L, a semi-automatic power strapping machine, has been introduced by Signode Steel Strapping Co., Chicago, Ill. The new machine rounds out the Signode line of standard M20 PSM's, sharing the same tensioning and sealing head and rugged structure but differing from the automatic models in having only the lower strap chute.

In using the M20L, the operator positions the package, steps on the feed switch, inserts strap in the lower chute, and then steps on the cycle switch to tension and seal the strapping.

While similar in operation to Signode's M2 models, the M20L's higher tension, faster feed, more rugged construction, and unlimited strap take-up will fit it into higher-production packaging lines. The lower chute of the new machine can be fitted into a narrow slot between the ends of conveyor sections; supplementary table or roller sections are unnecessary, though they are available as accessories.

Standard chute lengths are 18, 24 or 30″. Vertical strap guides, which deflect the strapping over the package toward the operator, will clear packages 15, 21 or 27″ high.

A tension control wheel enables the operator to adjust easily to tension up to 1,500 lbs. A 3-h.p., 1,800 r.p.m., 3-phase, 60-cycle, drip-proof motor is standard on the M20L.

Accessories include wheels and floor jacks, to provide mobility; a second DF-20B strap dispenser mounted alongside the dispenser that comes with the machine to provide for pre-loading of strap without interrupting production; out-of-strap safety switch to stop the PSM automatically when the strap supply is depleted, and an out-of-seals safety switch which automatically stops the M20L when the seal magazine is empty.

(Request Item No. F-1)

## Reed Cleaning Unit

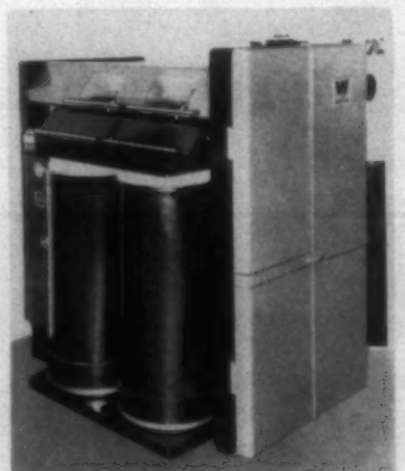
Greensboro Loom Reed Co. is making available a new reed cleaning machine for both pitch bound and all-metal reeds. The unit is said to be simple and compact. With this new unit, the reed can be brushed with either steel bristle or hair bristle or both without changing wheels. One man can achieve production rates as high as 30 reeds per hour with the unit, the company reports.

Power is supplied by a totally enclosed unit with minimum of ¾ h.p., 1,750 r.p.m. The steel bristle brushes use .008 gauge wire and have a 6″ diameter. The unit is mounted on a tool cabinet 18x21x31″ high, with two shelves.

(Request Item No. F-2)

## High Speed Drawing Frame

A new two-delivery, high-speed drawing frame capable of speeds of 800 f.p.m. has been developed by Whitin Machine Works. It will be known as the Whitin Even-Draft Model M7. It is the first modern two-delivery drawing frame built by Whitin and is a result of two years of study and research.



**Whitin's Model M7 drawing frame is capable of speeds of 800 f.p.m.**

A prototype model has been running on preliminary mill tests for the past several months in a Southern mill. These tests are said to indicate that the new Model M7 can conservatively be operated at speeds of 800 f.p.m. on both breaker and finisher drawing using carded stock. This speed is said to be faster than the current operational speed of any competitive drawing now available. Excellent test results are currently being obtained at these speeds.

The new machine will be produced by the company's subsidiary plant, Fayscott Landis Machine Corp. in Dexter, Me., where the work of tooling up for regular production is now underway. It is anticipated that some deliveries may begin in the Summer or early Fall against orders already taken for over 300 deliveries.

The test frame is being operated with a specially designed creel, but in accord with the trend towards larger diameter cans in the creel, a power creel has been designed to provide more efficient operation with the largest cans currently available. The delivery cans in front will be 20x42″.

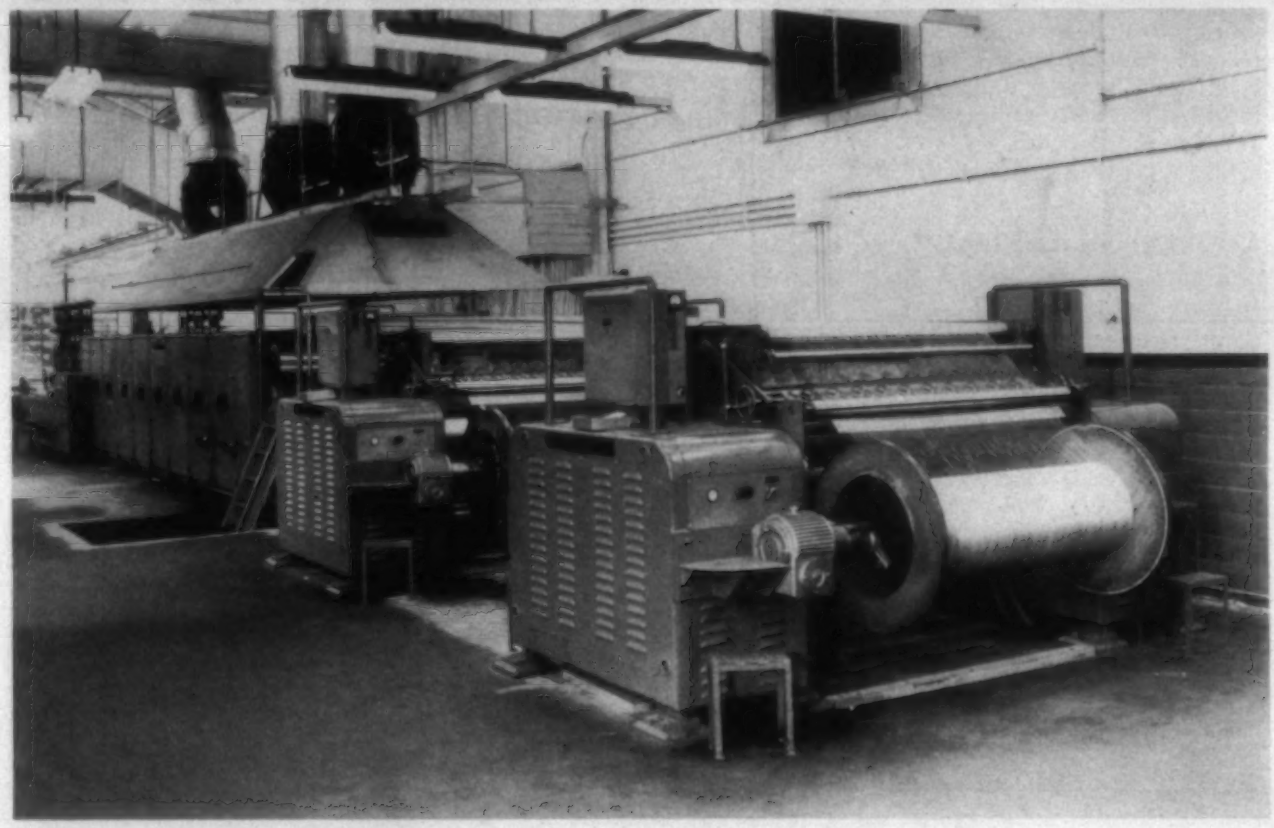
The Model M7 is equipped with the latest type Pneumafil vacuum cleaning system such as is now in use on late model Whitin four-delivery frames.

The new frame is designed to run with 10 ends up and is powered by a 5 h.p. motor using Vari-Pitch sheaves. A deceleration device is also provided to insure soft but quick stops.

The Even-Draft M7 is designed for maintenance-free operation. The frame and constructional components are of cast iron, as are the roll stands and the precision cut gearing. The bottom steel rolls are made with extreme care and to close tolerances to run smoothly at the highest speeds in rugged anti-friction bearings.

The drafting element is the Whitin four-over-five roll construction used on other Even-Draft models. The over-arm suspension weighting system is described as effective and efficient, with correct weighting made possible by pre-calibrated springs. This weighting may be

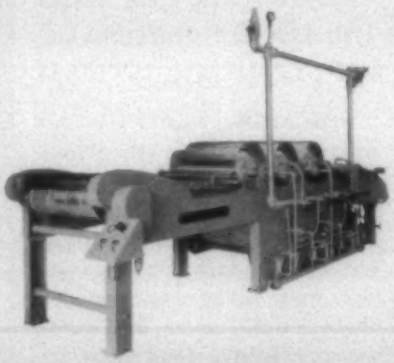
# ANOTHER RECENT COCKER GH SLASHER INSTALLATION



## 17 Cylinder Tire Cord Slasher

This tire cord slasher demonstrates Cocker's ability to engineer and build superb slashers for any type yarn and for any application. This extra heavy duty machine was designed to stretch heavy denier yarns up to 15%. It has 17 dry cans and 4 section beam take-up units and is fed from a Cocker magazine cone creel to provide continuous operation. Speeds up to 170 YPM.

All Cocker Slashers have valuable features not found on any other sizing equipment. Cocker's simple and efficient Torque Tube Drive*, individually removable cylinders, timing belt drive, air motor loading of size box top rolls, and many other exclusive Cocker features bring you "TOMORROW'S SLASHING TODAY".



**Cocker Laboratory Slashers duplicate mill slashing operations.**

We will be glad to send you our new illustrated catalog.

*Pat. Pending

## COCKER MACHINE & FOUNDRY COMPANY

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Contact W. S. Clark
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Oxford 7-2242

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**WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT**

quickly applied or released on each delivery.

Specially designed tube gears, supported around their circumference by heavy-duty ball bearings, are smoothly driven by a V-belt drive, which provides the necessary stability and capacity for such high speed operation.

(Request Item No. F-3)

## Level Dyeing Assistant

A new level dyeing assistant, called Dispersol CWL, which is designed to allow greater flexibility and freedom in the use of acid milling dyes, is now available through Arnold, Hoffman & Co., Providence, R. I. The new assistant is said to cut overall dyeing time and to improve level dyeing properties, according to AHCO. The improvement of level dyeing properties of those acid milling dyes normally considered poor in this respect permits dye combinations hitherto regarded as unsuitable. This is accomplished without reduction in light or wet-fastness.

By incorporating Dispersol CWL in acid milling dyebaths to reduce the rate of dyeing, higher starting temperatures can be employed, the company reports, resulting in shorter overall dyeing times. Further, the new assistant enables acid milling dyes to be applied under strongly acidic conditions.

(Request Item No. F-4)

## Right Angle Gearmotors

The Master Electric Division of Reliance Electric & Engineering Co., Cleveland, Ohio, has introduced an entirely new line of fractional right angle gearmotors, 1/8 through 1/3 h.p.

One of the most striking changes in the new Master gearmotor line, Reliance reports, is weight reduction. The 1/4 h.p. gearmotor weighs only 26 lbs. This is 20 lbs. lighter than the present unit.

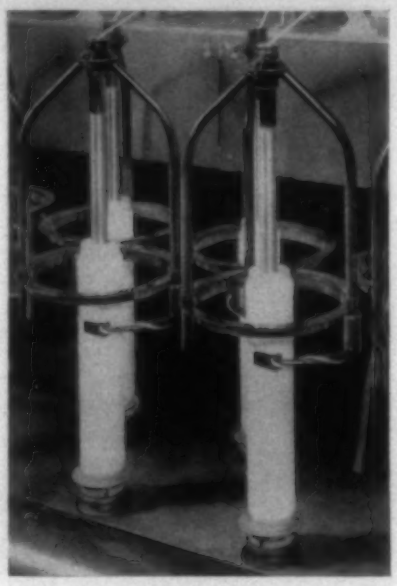
Cited as an unusual feature of the new gearmotor is its reversible output shaft. The user can transfer the shaft to the right or left-hand side of the gear unit in the field. The interchangeable bearing housing plates on either side of the gear head are easily removed. The shaft and reduction gear can then be taken out and inserted on the other side of the unit.

The new gearmotor is smaller overall. The cast-iron gear case has an integrally cast end shield for mounting the footless Duty Master a.c. motor. The mounting base for the gearmotor is located under the gear end, close to the power take-off, for maximum rigidity.

This new unit is available in 1/8, 1/6, 1/4 and 1/3 h.p. ratings in drip proof, totally-enclosed, and fan cooled enclosures. Thirteen reduction ratios are offered as standard, and dimensions are identical for all units.

(Request Item No. F-5)

## Roving Flyer



Roberts Co., Sanford, N. C., announces the development of what it describes as a radically new design high speed roving flyer which can be applied to existing frames and is also standard equipment on Roberts roving frames.

Reversing an industry trend towards importing devices of this type from European manufacturers, Roberts has established in this country complete manufacturing facilities for its new Roberts flyer, marking for the company a further diversification of its product lines.

Increased flyer speeds of 10 to 15% above existing flyers, up to 1,200 r.p.m., from 5 to 20% more roving on the bobbin, and consistently more even roving are some of the benefits of the new flyer, Roberts reports.

A unique rim joins the flyer legs near the bottom, thus eliminating leg deflection due to centrifugal forces and permitting higher rotating speeds.

The roving sliver passes down through a completely enclosed tubular leg on the way to being wound on the bobbin, protecting the roving at high


## The P&F Technical Service Representative can help!

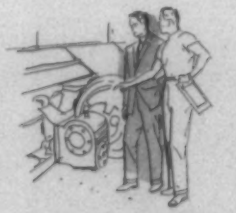
So many things can happen to interfere with smooth weaving operations! A machine can go out of adjustment, stuck ends can break the yarn, uneven tensile strength can cause warp stops, hard size problems can plague you. And while the results of the trouble may be obvious, the cause and cure are sometimes harder to discover.

That's where Penick & Ford comes in! We maintain one of the largest staffs of trained textile experts in the business. If you have used our Crown Thin Boiling Starch, Douglas Starch or Dextrine, Clearsol or Penford Gun, you know that P & F means quality. It also stands for service.

The Technical Service Representative who responds to your call is a skilled sleuth when it comes to detecting textile troubles. After studying operations in hundreds of mills around the country, he knows the trouble spots and shortcuts, and he has more answers than you can shake a spindle at. In his kit are all the tools needed for scientific detection – thermometer, viscosimeter, pyrometer, refractometer, etc. And he is well armed with 500 Penick & Ford starches and derivatives.

Even if you have no specific problem, our technician may be able to make a cost-saving or quality-improving suggestion to advance your weaving efficiency. So why not take advantage of his experience? A letter or telephone call to our Atlanta Office will bring him promptly. The address is 1531 Marietta Blvd., Atlanta, Ga. Tel.: SYcamore 4-9521.

The P & F Technical Service Representative tests yarns and textiles for abrasion resistance, etc . . .



Checks out your warp sizing, finishing and glazing solutions in actual production conditions . . .

Studies machines and methods . . . brings his wide experience to bear on your whole weaving operation.

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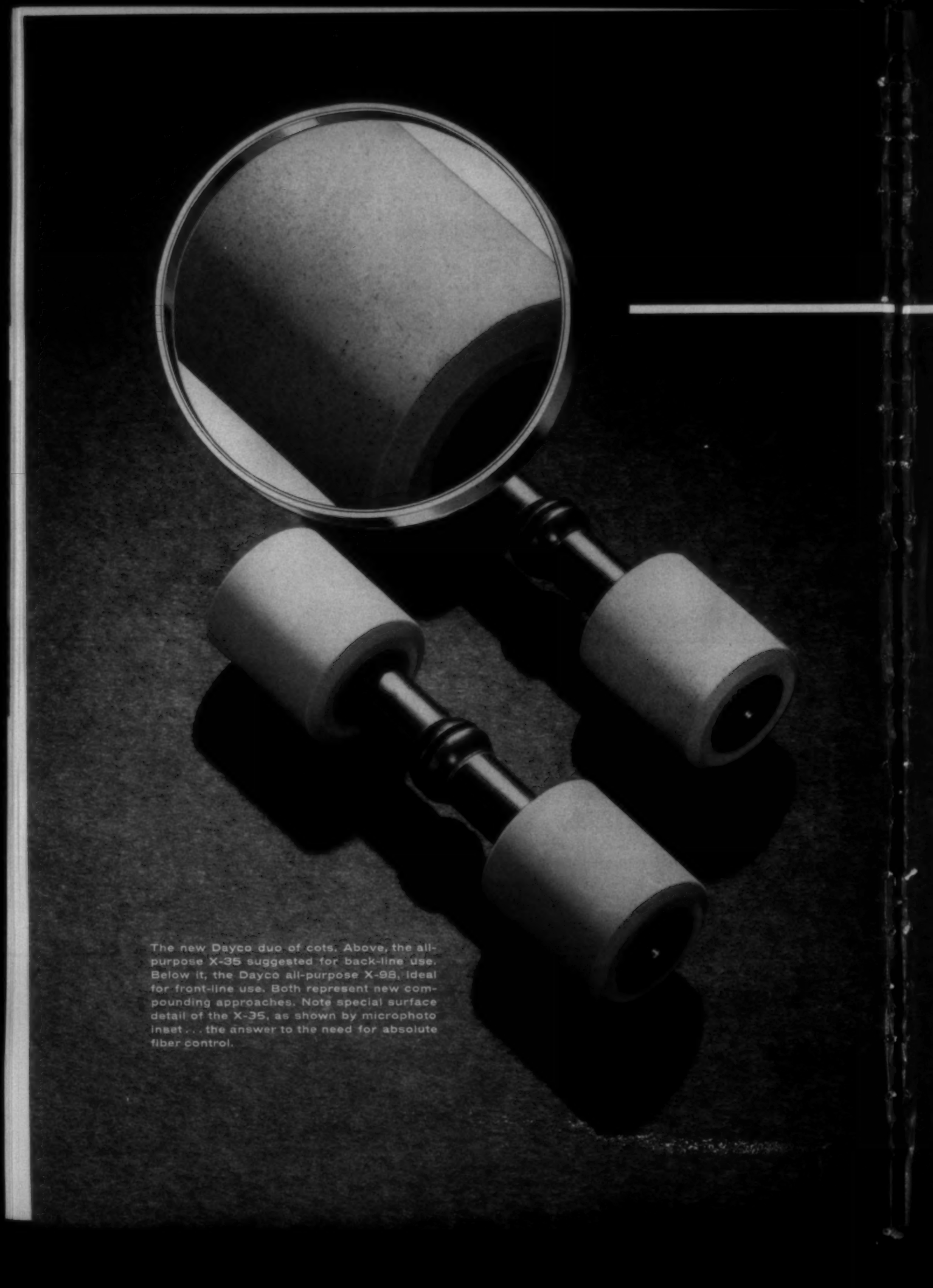


The new Dayco duo of cots. Above, the all-purpose X-35 suggested for back-line use. Below it, the Dayco all-purpose X-98, ideal for front-line use. Both represent new compounding approaches. Note special surface detail of the X-35, as shown by microphoto inset . . . the answer to the need for absolute fiber control.

# Dayco Presents Two All New, All Purpose Cots The X35 and X98

*New ingredients and special surface give positive yarn control with every fibre—natural, synthetic or blend.*

Dayco proudly presents another record-breaking achievement—an outstanding pair of all new, all-purpose cots, the X-35 and the X-98. Compounded with elements never used in cots before, they represent the first major improvement in cot performance offered in many years.

Ideal when used in combination, with the X-35 on the back line and the X-98 on the front, these cots are *all-purpose* in the fullest sense. Both handle any fiber...yarn of any size from 3's to 140's...on any type of system . . . with greater yarn uniformity and greater efficiency of operation. Even on Dacron and other difficult blends, the X-35 and X-98 show outstanding drafting results.

## AN ENTIRELY NEW ELEMENT

The new Dayco X-35 is truly a revolution in cot engineering. Because it is compounded with an entirely new element, its heavy duty surface assures positive grip, breaks up surface tensions on all fibers.

The new Dayco X-98, front-line companion to the X-35, introduces a completely new surface formulation to the textile industry. On the finest or coarsest yarns the Dayco X-98 is a superior performer.

The Dayco X-35 and X-98 have undergone over 12 months of thorough testing under the toughest mill conditions on all types of systems and fibers.

## MILL TESTS PROVE SUPERIORITY

Results prove that these new Dayco Cots are top performers. Static problems so common with synthetics are reduced to a new low. Coefficients of friction of the X-35 and X-98 prove ideal for any drafting task. Their lack of affinity for all fibers produces cleaner spinning with less fiber left on the clearers.

Whatever your drafting requirements or equipment, test run the all-purpose Dayco duo—the X-35 and X-98. You can expect to set new high standards in your yarn production, regardless of the fiber.

## TRY THE ALL-PURPOSE TEAM

Go Dayco all the way—team up the new advanced Dayco X7 *all-purpose* apron with these revolutionary new *all-purpose* Dayco cots and expect superior drafting performance. You'll get it!

Ask your Dayco Representative to set up a trial installation. Phone or write Dayco Textile Products Co., 401 South Carolina Bank Building, Greenville, S. C. Overseas plant: The Dayton Rubber Co. Ltd., Dundee Scotland.

**Dayco** TEXTILE PRODUCTS CO.

*Division of Dayco Corporation*

*FOR THE TEXTILE INDUSTRY'S USE—*

speed from air turbulence that can cause fluffing. The tubular leg is said to be virtually self-cleaning, thus eliminating a major maintenance problem of conventional flyers. Initial breaking-in is also minimized.

Threading of the roving strand can be performed quickly in either direction from bobbin to delivery roll by use of a flexible threading hook supplied. Doffing of bobbins is performed simply by one of the methods used for conventional type flyers.

Of tempered steel with a special easy-to-clean finish, the Roberts flyer also features a counter-balanced presser. All Roberts flyers are dynamically balanced at 1,000 r.p.m. to provide smooth operation with consistent results from spindle to spindle, the company points out.

As an example of increased bobbin weights obtainable, the company noted that a typical 12 x6 frame can be boosted to a 12x7 or even to 14x7 package size with 80 to 90 ounces of cotton roving.

As a part of its technical service to mills desiring high speed roving operation, Roberts also surveys frames to which the flyers will be applied, to recommend other modernization features that may be required.

(Request Item No. F-6)

## Water-Emulsion Binders

Antara Chemicals, a division of General Aniline & Film Corp., New York City, has announced the first three products in a new series of water-emulsion copolymers of vinylpyrrolidone. They will be available initially in development quantities only and will be marketed under the registered trademark Polectron. This series represents the company's first entry into water-emulsion polymers.

The first three products in this new group will be called Polectron 130—which is a vinylpyrrolidone/ethyl acrylate copolymer emulsion; Polectron 430—a vinylpyrrolidone/styrene copolymer emulsion; and Polectron 450—another vinylpyrrolidone/styrene copolymer emulsion. Each has a 40% solids content.

The features of the Polectron series open up new possibilities for water-emulsion polymers in that they offer dye receptivity, unusual emulsion stability, excellent adhesive properties, and unique film-forming properties. They are expected to find application in the fields of textile coating and glass fiber sizes. The superior dye receptivity exhibited by these products will make them highly desirable as nonwoven fiber binders and latex rug backings, Antara reports.

All three of the first Polectron copolymers are insoluble in the following solvents: water, ethyl alcohol, ethyl acetate, acetone, methyl ethyl ketone, benzene, carbon tetrachloride, heptane, and dioxane. Exceptions will be found in Polectron 430 which is partly soluble in benzene and Polectron 450 which is partly soluble in water.

(Request Item No. F-7)

## Polyester Colors

The Koppers Co., Pittsburgh, Pa., reports that it is making available for the first time a full and complete package of colors for polyester fibers which adequately assure the highest fastness properties.

The company's chemical and dyestuffs division has unveiled its new range of 14 Amacron dyes designed to produce vividly all of the high mode shades, tailor-made for the popular polyesters.

The Amacron line of colors is said to feature outstanding brightness, and fastness to light, washing, crocking, sublimation and perspiration.

Other features cited are:

—Higher tinctorial value.
—Brighter (with blends of cotton and viscose).
—Level dyeing with complete exhaust.
—Perfect dispersion.
—Combine with all other shades, blends and combinations.
—Build up deep shades without crocking.
—Perspiration resistant.
—Ideal for home machine washing and drying and commercial dry cleaning.

The new dyes are said to have complete affinity with polyester fibers, together with the highest fastness properties. This results in the dyer now being able to offer richer and deeper shades in all polyester fibers.

In addition, the company says, any desired color can be matched with virtually complete assurance of fastness, including the shades now most in demand: scarlets, cerise, violets, bright greens and blues.

Because of their fastness properties to sublimation, the 14 Amacron colors

may be applied by the heat cure method and lose none of their brilliance, Koppers reports. In pressure dyeing, the dyes can be applied without carriers.

The Amacron colors are offered as insoluble powder dyes with high dispersion. Water filter tests are said to show practically no dye specks. For dyers who wish to apply colors with a padder, Koppers also offers its Amacron range in liquid form.

Another outstanding feature of the Amacrons is said to be apparent in the dyeing of blends of polyester and cellulosic fibers. The Amacron colors leave the cellulosic fiber practically unstained, thus making it possible to fill in cotton or viscose with appropriate matching or contrasting colors.

The dyes can be used for printing by roller or screen printing, since here again they give excellent speck-free prints and are fast to sublimation during steaming.

(Request Item No. F-8)

## Fast Dissolving Salt

A new fast dissolving salt has been introduced by Morton Salt Co., Chicago, Ill. Called Dendritic salt, it is said to make an ideal blending agent because of its dissolving rate, low weight per volume and excellent storing qualities. Dendritic salt is said to be unique in that its crystal structure is star-like instead of the usual cubical or crystal aggregate form. It is obtained by adding a chemical to brine as it is evaporated in the vacuum pan. Experimental uses are said to have shown that the salt performs excellently as a bulking agent.

(Request Item No. F-9)

## Concentrated Softener

A new cationic softener in concentrated liquid form has been developed by Du Pont's dyes and chemicals division.

Called Avitex Y concentrated softener, the new compound is designed to be effective on all types of fibers, and in the case of hydrophobic synthetic fibers also provides moderate antistatic protection. It improves the tear strength, napping properties, and sewing characteristics of treated fabrics and can be applied alone or with starches, gums, and thermoplastic, thermosetting, or thermoreactive resins.

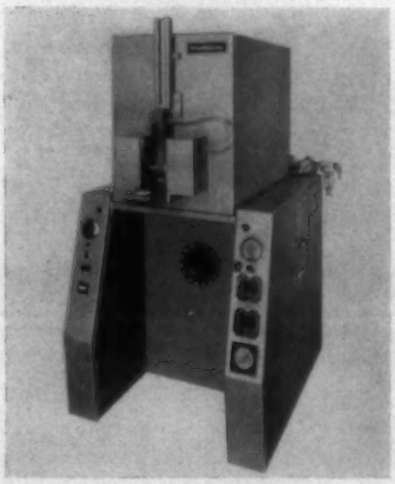
The new softener causes only slight changes in the shade of selected vat and fast-to-light direct dyes, and does not result in any serious reduction in lightfastness.

Fabrics finished with Avitex Y are said to have excellent resistance to discoloration and odor. Treated fabrics do not become yellow when exposed to heat, light, ozone, or atmospheric oxides of nitrogen that are often encountered during application or storage.

Avitex Y is readily dispersed in water at temperatures of 100 to 160° F. and can be applied by padding, spraying or by exhausting from a long bath. It has a high degree of substantivity for cotton, rayon, nylon and other synthetic fibers. The recommended concentrations vary from 0.1 to 1.0%, depending on the fibers being treated and the effect desired.

(Request Item No. F-10)

## Electronic Labeller



A completely shielded electronic labelling unit has been introduced by Thermatron, the electronics division of Willcox & Gibbs. Internally shielded so that it conforms to F.C.C. requirements without the need for a screen room, the new machine is described as unique in its field. The shielding feature allows for easy mobility of the machine to any section of the plant, so that it can readily be incorporated in a production line, or used in the shipping room to affix labels, just prior to shipment.

Interchangeable and adjustable label feed hoppers make possible easy and rapid conversion to various size labels, the company reports. The item to be labelled is jig positioned by the operator—the label is automatically picked up from the hopper by the automatic high-speed label feed and welded to the garment in a fraction of a second.

The labeller does not require a hot plate and consequently eliminates the

possibility of scorching. Since labelling on already folded garments is possible, labelling can now be done in the shipping room just prior to packaging. The result is uninterrupted work schedules and maximum flexibility of inventories. The ability of the labeller to remove previously welded labels means that a manufacturer can re-label his merchandise for specials or quick deliveries—in many cases without the trouble of unfolding and folding the item.

An unskilled worker can start producing immediately with the tap of a foot, the company reports. Approximately 500 dozen garments can be labelled in an 8-hour day.

The machine is available for purchase or lease, and is serviced by Willcox & Gibbs.

(Request Item No. F-11)

## Yardage Counter

An accurate and inexpensive yardage counter and control device which measures and regulates the amount of yarn being machine wound onto spindles of universal twisting frames has been designed by Dunn Engineering Corp. of Cambridge, Mass., and is being manufactured and sold under a licensing agreement.

The unit measures the length of yarn wound upon a spindle and automatically stops the spindle when the desired amount has been wound. It is installed on the universal type twister, commonly used in the carpet mills as well as other woolen mills and asbestos plants.

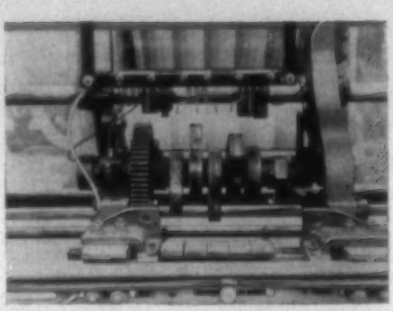
Designed for the carpet industry, the unit can be set at any desired yardage in 50-yard increments over an effective 2,100-yard range. Accuracy is said to be within 10 yards at any setting.

(Request Item No. F-12)

## Loom Lubrication

A new centralized lubrication kit for underwarp lubrication, preassembled as a package, has been introduced by Bijur Lubricating Corp., Rochelle Park, N. J. The kit can be quickly installed on high-speed looms by plant maintenance personnel with no specialized knowledge of lubricator installation, the company reports.

The lubrication kit consists of a Bijur One-Shot lubricator, distribution system with meter units and adapters for feeding controlled quantities of oil to gears and cams on the loom's underwarp section. All elements of the distribution system are mounted on a steel bar which is equipped with mounting brackets. Installation at user plant involves only the mounting of this bar in position over the underwarp, installing the lubricator adjacent to the loom motor, and making a few tubing connections.



**This centralized loom lubrication kit introduced by Bijur Lubricating Corp. is designed to serve a total of 12 points on the loom. If less than the full complement of six cams is used, the fittings not required are blocked off with caps.**

In addition to reducing installation time, Bijur reports the lubricator kit eliminates two loom lubrication problems: stopping loom to lubricate; and staining of the fabric when lubricating by hand. The cams and gears lubricated by the Bijur system are located in inaccessible positions on the lower section of the loom beneath the warp. Bijur lubrication requires only the simple operation of the lubricator at periodic intervals, with no loom downtime.

The Bijur One-Shot lubricator is the HiB type with a two-pint reservoir. The lubrication kit is designed to serve a total of 12 points on the loom. If less than the full complement of six cams is used, caps are supplied with the package to block off the fittings not required.

(Request Item No. F-13)

## Synthetic Rubber Latices

The introduction and commercial production of two new butadiene-styrene synthetic rubber latices, designed for textile applications, has been announced by the chemical division of The Goodyear Tire & Rubber Co., Akron, Ohio.

The new materials, Pliolite 440 and Pliolite 460, are recommended for textile and carpet backings, binders for nonwoven fabrics and scrim adhesives for carpets.

Both latices are characterized by low viscosity and modified with chemicals known as carboxylics to provide better overall physical properties and faster,

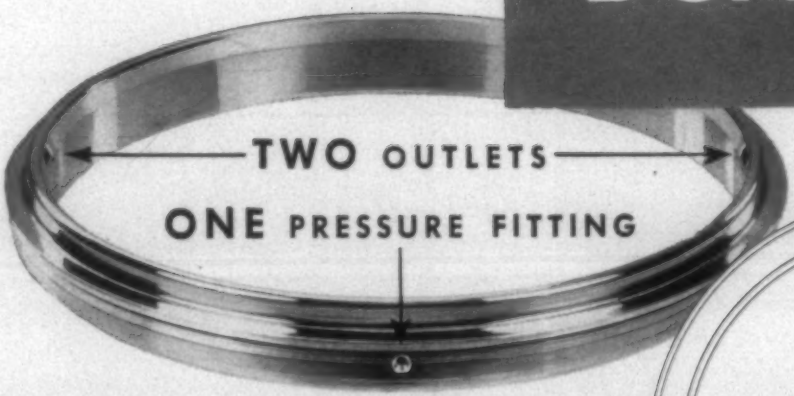
# NOW *for the first time . . .*

## a ring with effective distribution of either GREASE or OIL . . . .

*Diamond Finish*

## "DUALUBE"

PATENT PENDING



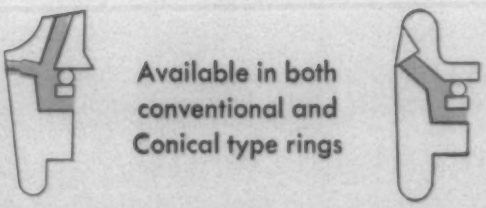


**Pressure-Lubricated Ring $\frac{43}{64}$" and up**

"Dualube" conducts the lubricant 90° in each direction from the intake, and emits it at two points on opposite sides of the circumference. This is the first and only ring giving multiple distribution of both grease and oil with equal efficiency. Improved lubrication is assured, permitting . . .

***HIGHER SPEEDS – LONGER TRAVELER LIFE!***

***Write or 'phone for details***



Available in both conventional and Conical type rings

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more economical curing. They also contain an antioxidant for better aging qualities.

As a result of the carboxylics in these latices, Goodyear pointed out, processors can use zinc oxide as well as conventional cures. Chief differences between the two synthetics is that Pliolite 460 imparts more resinous properties which result in stiffer hand or body in the end product.

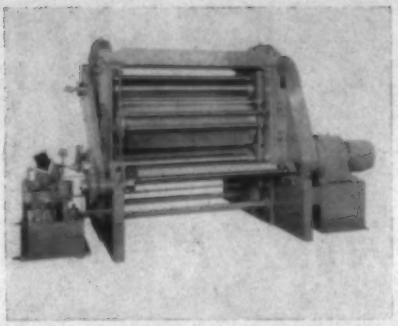
The versatile new materials, the company said, provide compounders a single product which can be applied to several product areas through different compounding techniques.

(Request Item No. F-14)

## Calender Lubrication

The John Verduin Machine Corp., Paterson, N. J., is now using a packaged continuous-flow lubricating system on all its calenders. Developed by Purolator Products, Rahway, N. J., the packaged circulating system is said to have eliminated a critical bearing problem on calenders used in high temperature finishing operations. The calender rolls operate at high speeds and variable pressures up to 100 tons. Since they operate at temperatures exceeding 420° F., the oil must be cooled prior to bearing lubrication.

The packaged system is designed to provide accurate control of lubricant temperature and oil viscosity with resultant reduction in bearing friction. Bearing life is increased as operating temperatures are decreased through the dissipation of heat into the circulating lubricant.



**Purolator Products Inc. has developed a packaged continuous-flow lubricating system *(arrow, lower left)* for use on calenders used in high temperature finishing operations.**

The system uses a Micronic oil filter to remove all metallic particles and other foreign materials before the bearings are damaged. It handles liquids from soluble oil to 2400 SSU lubricating oil with capacities ranging from 1½ to 70 g.p.m.

(Request Item No. F-15)

## Leveling, Retarding Agent

The Arkansas Co., Newark, N. J., has introduced Dyasist No. 486, described as a superior leveling and retarding agent for use in dyeing woolen fabrics and yarns. The agent is particularly applicable where acid dyes requiring sulfuric acid are used and in such cases it is said to produce extremely level and uniform dyeings. It may also be used with most milling colors with excellent results.

In addition to its use as a leveling agent in dyeing, Dyasist No. 486 is recommended for stripping dyed material before redyeing. It is mildly cationic in nature and practically neutral in reaction. In consistency, it is an amber liquid which dissolves readily in water. The storage properties of the new agent are described as excellent under normal atmospheric conditions.

(Request Item No. F-16)

## Compression Strapping Unit

A new series of compression strapping machines, including two units designed specifically for textile industry use, has been developed by Acme Steel Co., Chicago, Ill.

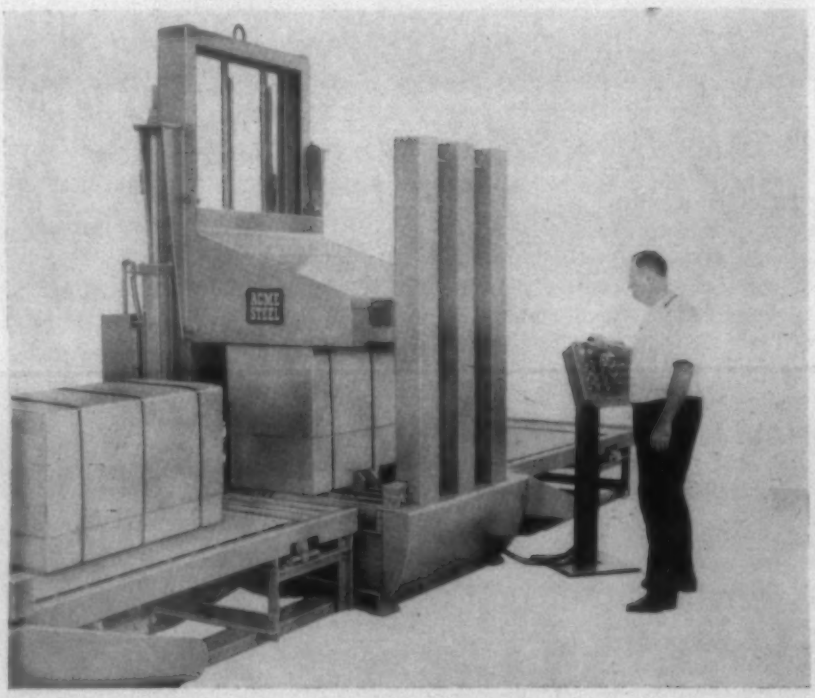
Textile industry machines are the Acme Models F11A, a semi-automatic unit, and the F11C, a fully-automatic strapping machine capable of applying three straps simultaneously. Production rate is four cartons per minute.

Each of the machines incorporate three of Acme Steel's new, light-weight basic strapping mechanisms. Each mechanism weighs 75 pounds and measures 26" long 14" high and 12" wide. It is described as the most compact, low-cost yet developed. As incorporated in the new F11 compression strapping machines, the easy portability of the mechanism allows removal for servicing or repair to be made by one man in four to five minutes.

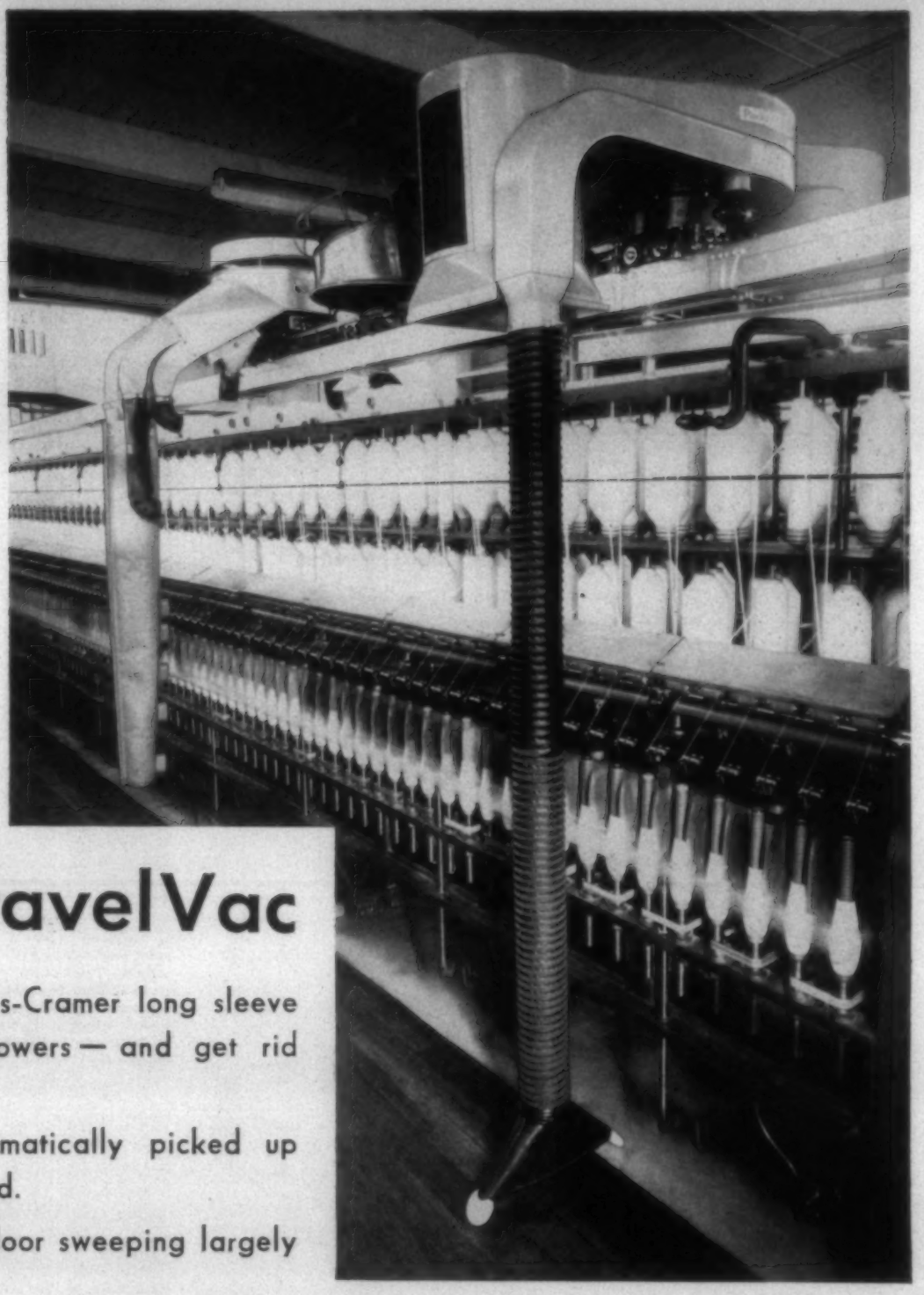
The strapping machines are electrically controlled and completely air-powered, with hydraulic power available as an option. Length of strap feed and take-up is adjustable to package circumference. Power take-up eliminates the need for hand take-up of extra strap in applications where packages vary widely in circumference.

Compression pressure can be varied from 0-5000 lbs. According to Acme, the compression platen is designed to operate without "canting," thus exerting equal pressure on all parts of a package in spite of varying density of contents.

Machines can be factory ordered to



**Components of Acme Steel Co.'s new automatic strapping machine include a full strap-guiding track, powered base rollers, a package centering device, and a dual strap tension system.**



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to your Parks-Cramer long sleeve traveling blowers — and get rid of the lint!

Lint automatically picked up and collected.

Manual floor sweeping largely eliminated.

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## Parks-Cramer Company

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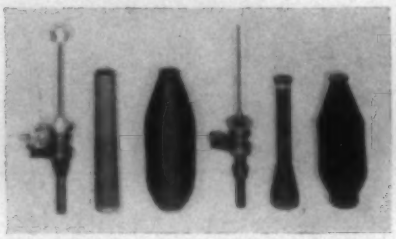
handle strap widths of ⅜, ½, ⅝ or ¾", in gauge thicknesses of .015, .018, .020 and .023".

(Request Item No. F-17)

## Spindle Adapter For Paper Tubes



**This shows *(left to right)* the new Perkins spindle adapter, paper tube and full bobbin as compared with the conventional spindle, bobbin and package on the right.**

Joel S. Perkins & Son Co., Gloucester, N. J., has announced the development of a new spindle adapter for conversion to paper tube spinning that is said to increase production of present woolen and worsted spinning equipment up to 20%.

In-plant tests of the conversion package are said to have shown that the new bobbin when fully loaded, with 20% more yarn, is actually lighter in weight than a fully loaded wooden bobbin with much less yarn. Longer production runs were possible with less down-time and fewer knots. The new bobbin does not splinter or wear unevenly and should replacement ever become necessary the cost is less than half the price of the conventional type.

For greater operator safety, and to allow higher operating speeds, a brake has been built into the adapter. The operator no longer needs to stop the bobbin with his bare hand risking splinter infection and cuts that result in work stoppage and complications.

(Request Item No. F-18)

## Silicone Finish

The Arkansas Co. of Newark, N. J., has announced the development of a new silicone finish for cotton to be offered under the trade-name, Hydro-Pruf C.

Cotton fabrics treated with Hydro-Pruf C in combination with a special catalyst are durably water repellent and will stand many washings at the boil in the presence of alkaline extenders commonly used by commercial laundries, the company reports.

Similar to most silicone finishes, it is also durable to many dry cleanings. In addition, Hydro-Pruf C is designed to produce a finer hand on cotton fabrics and a much improved drape.

The company reports that Hydro-Pruf C possesses a high degree of stability and does not break down on continuous operation and, consequently, will not spot the fabric or oil out on the rolls when applied.

Hydro-Pruf C is said to be compatible with most thermosetting resins and color fixatives and requires no extra operation or pre-washes in its application to cotton fabrics. Of special interest is the fact a cotton fabric dyed with naphthol colors may be made durably water repellent without shade change.

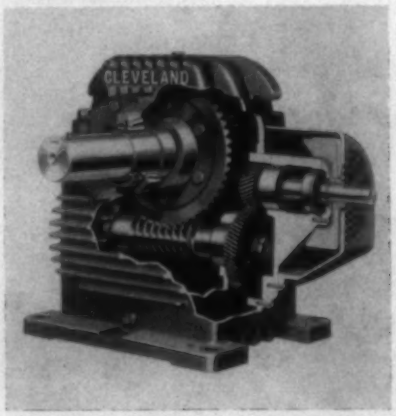
(Request Item No. F-19)

## Unifil Loom Winder

Leesona Corp., Providence, R. L., reports that its Unifil loom winders are now being made available for use on Crompton & Knowles S-6 box looms running single filling yarn. This means that mills running box looms can now realize the production advantages of Unifil's automatic operation, while mills running both single-shuttle and S-6 box looms can apply Unifils to their full complement of looms.

(Request Item No. F-20)

## Speed Reducers



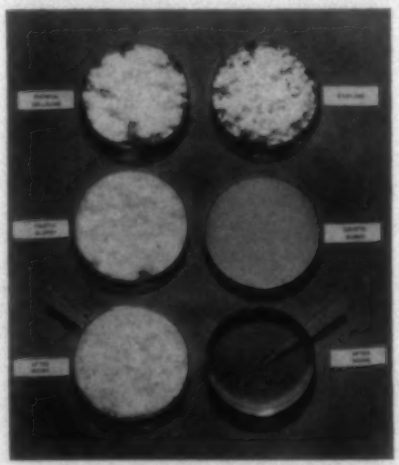

Cleveland Worm & Gear Division of Eaton Mfg. Co. in Cleveland, Ohio, announces the availability of fan-cooled helical worm gear speed reducers in ratios extending approximately from 34:1 to 394:1. The reducers come in seven sizes, ranging from 4 to 12" center distances. Ratings are fractional to 58.5 h.p.

Helical primary gears are cut from high hardness steel. In the secondary reduction, worms are machined from medium carbon steel hardened by the Flamatic process. For increased wear and fatigue resistance, the worm gears are cut from bronze of a high tin-copper content and are bolted or mechanically keyed to cast iron hubs.

On larger sizes, both primary and secondary gear trains share a common housing, while separate housings are used on 4 through 6" sizes. In all sizes, both gear reductions share a common oil bath. Shafts are supported by ball and tapered roller bearings sized for heavy radial and thrust load capacity.

(Request Item No. F-21)

## Cellulose Material For Sizes, Binders And Coatings



**This gives a comparison of the responses of chemical cellulose *(left-hand column of petri dishes)* and the new Ethylose graft cellulose *(right-hand column)* when subjected to sodium hydroxide. The graft cellulose responds instantly to the caustic, forming a clear solution. However, the chemical cellulose fibers merely swell, remain static and unaltered.**

A new raw material which is expected to find use in textile sizes, binders and coatings has been developed by Rayonier Inc., New York City. Called Ethylose, the new material is a high-quality, purified wood cellulose modified or grafted with a small amount of ethylene oxide to alter its behavior characteristics.

Ethylose solutions can be adjusted to proper solids-viscosity ranges for coating, tub sizing or surface spraying. It can be regenerated by alkali removal or heat followed by washing. Neutralization can be accomplished by acid-salt solutions such as 10% sulphuric acid and 15% sodium sulphate, or by acid alone. Acid-salt solutions of a dehydrating nature regenerate a product with higher density, lower gel swelling and best physical strength.

(Request Item No. F-22)

# For the Mill Bookshelf

### Resonance Analyzer

A 12-page brochure on the Schlumberger NRM (nuclear magnetic resonance) analyzer and its applications is now available from Ridgefield Instrument Group, Schlumber Corp., Ridgefield, Conn.

The brochure is illustrated with diagrams and charts, discusses the basic principles of nuclear magnetic resonance analysis and covers a great variety of product quality control, process control and research uses for Wide Line NMR analytical techniques in the chemical, textile and plastic industries.

Among the analyzer applications discussed are: quantitative elemental analyses; absorbed/adsorbed liquids analyses; solid/liquid analyses; crystallinity and structural determinations; and wetting and moisture bonding studies.

(Request Item No. F-23)

### Speed Measurement Systems

The General Electric Co., Schenectady, N. Y., has announced the availability of its new bulletin on speed measurement systems—Bulletin GEZ-3251. Consisting of 12 pages, the bulletin describes the company's complete line of a.c. and d.c. tachometer generators and indicators. It relates information on applications, calibration, accuracy and method of selection. Other features of the bulletin include specifications, schematics and photos of the measurement systems described.

(Request Item No. F-24)

### Flexible Motor Couplings

A new 6-page Folder 2975, "Type MC Geared Flexible Motor Couplings," is available from Link-Belt Co., Chicago. The new publication is designed to bring together all the pertinent data on Link-Belt motor couplings including the three new features added to the line: a new corrosive duty cover that has exceptional resistance to acids, alkalines and solvents for applications that subject couplings to chemical attack; a new spacer adapter that speeds and eases maintenance of couplings, driven pumps and compressors by permitting installation with an access gap between shaft ends; and a larger size added to the line that now extends the application range of the couplings to a 2⅝" bore size.

The MC couplings described in the new folder are designed specifically for use as motor couplings for transmitting power to pumps, compressors, generators, speed reducers and similar applications.

(Request Item No. F-25)

### Variable Speed Drives

A new 112-page variable speed catalog featuring the company's exclusive lube-free integral and fractional horsepower variable speed drives has been published by Sterling Electric Motors Inc., Los Angeles, Calif. The brochure is fully illustrated; gives cut-away drawings and photos for more detail on working parts; and has a number of integral and fractional modifications, including single, double and triple reductions, as well as various horizontal and single and double worm assemblies.

Price section of the catalog covers 2:1 to 6:1 variations and maximum variations. Modifications and accessories, dimensions and technical information are also included.

(Request Item No. F-26)

### Improved Avril Rayon

American Viscose Corp., Philadelphia, Pa., has released a new technical service bulletin describing its improved Fiber 40 (Avril Rayon). The new fiber is designed to supplement the high wet modulus and caustic resistance of the original fiber with very high fiber strength and substantially increased toughness and abrasion resistance. Fiber 40 has mechanical properties much like those of cotton and can be used in blends with all grades of cotton, the company reports. It is designed to contribute strength, improve luster and appearance and give a softer hand in these blends. The fiber is available in deniers of 1.0, 1.25 and 1.5, with the possibility that a 3.0 denier may be available in the near future if a demand for it develops.

The bulletin incorporates photographs showing cross-sections of the fibers; comparison charts showing the differences and similarities between Fiber 40, cotton and rayon; processing tips as to how the fiber should be handled in various steps through the mill; and dyeing instructions.

(Request Item No. F-27)

### Torque Motors

A new bulletin, Torque Motor Bulletin 208A, describing its line of torque motors has been announced by The Ohio Electric Mfg. Co., Maple Heights, Ohio, a subsidiary of Howell Electric Motors Co. The bulletin contains speed-torque curves, duty specifications, dimensions and lists a wide range of ratings.

Torque motors are designed to perform a variety of functions: close and hold closed; open and hold open; lift and hold up; tense and hold tensed; press and hold pressed; pull and keep pulled. They have long-proved uses for such jobs as operating brakes, cams in conjunction with mechanical linkages, clamping mechanisms, clutches, constant-pressure adjustment, elevator door openers, jigs and fixtures, reeling, slack take-up in winding and tensioning devices, reports the company.

The torque motor is both a motor and a solenoid. Unlike conventional motors, it is rated by torques (oz./ft., lb./in. or lb./ft.) and duty specification is based on per cent of time the motor may safely be stalled across the line (5, 10, 25, 50 or 100%).

Motors listed in the bulletin range from 1.5 to 96 oz./ft. Electrical designs are: 110 to 550 volt; 1, 2 and 3 phase a.c.; and 115, 230 volt d.c.

(Request Item No. F-28)

### Hunt Let-Off

A new brochure explaining the Hunt Let-Off has been published by the Southern Machinery Co., Greenville, S. C. The let-off motion is designed to make use of the varying forces exerted on the whip roll as the beam diameter decreases. It balances this varying force against a fixed force established by dead weights. The Hunt automatically holds these two forces in constant balance by the steady changing of variable speed pulleys. Worm gears provide the drive action throughout so that the gear drive

feeds the warp to the loom smoothly and evenly.

With the Let-Off there is no need to change the tension when similar warps are used on a loom, the company reports. When the construction changes, a new tension can be applied by simply adding or subtracting the weights as required.

(Request Item No. F-29)

## Lab Testing Instruments

The United States Testing Co., Hoboken, N. J., has released six new bulletins (Nos. 20-25) describing new instruments developed in its laboratories.

A laboratory dry cleaning machine is described in bulletin 21. It is said to be a precision engineered apparatus that was developed for investigating colorfastness and dimensional changes in fabrics during dry cleaning.

Bulletin 20 describes a new automatic length recorder which is designed to record lengths of flexible or semi-rigid materials.

The flammability tester, developed to measure the flammability of clothing and textiles for clothing use under carefully controlled conditions, is described in No. 22.

Bulletin 23 describes the atmospheric fume chambers—the drum model and squirrel cage model—which are designed to determine colorfastness of fabrics.

A multi-motion abrasion pilling tester, bulletin 24, has been developed by the company to measure the pilling tendency of woven and knitted goods.

Bulletin 25 describes the tension presser that is designed to measure the dimensional restorability in fabrics.

(Request Item No. F-30)

## Polyethylene Glycols

A new 65-page bulletin describing the properties and uses of Carbowax polyethylene glycols produced by Union Carbide Chemicals Co., New York City, has been published by the company.

Carbowax glycols are used in the preparation of softeners, lubricants, anti-static agents and conditioning agents. Because of the wax-like nature of the solid compounds, they also function as knitting sizes for many types of yarns and as water-solubilizing compounds of lubricant mixtures.

Fatty acid esters of Carbowax polyethylene glycols are used as detergents, anti-static lubricants, softeners, dispersants and emulsifiers.

The booklet covers physical properties, solubilities; specification limits; test methods; storage, handling and shipping; toxicological properties; and selected literature references.

(Request Item No. F-31)

## Equipment Leasing

A new illustrated brochure, "The Engineered Equipment Lease," by United States Leasing Corp., San Francisco, Calif., presents full facts about the leasing of new and used equipment. The 16-page brochure explains how any type or amount of equipment can be obtained on lease. Subjects include: conservation of capital and credit; tax-timing benefits; balance sheet effect; cash flow improvement; recovery of capital through sale and lease-back; and other exclusive advantages.

(Request Item No. F-32)

## Servicing Electric Trucks

A new 94-page manual on servicing electric Clarklift fork trucks is available from Clark Equipment Co.'s industrial truck division, Battle Creek, Mich. Titled "Servicing the Clarklift Electric," the manual includes 189 photographs and 41 color-coded schematic circuits.

Designed to supplement a slide film on electric truck maintenance, the manual is divided into two parts and an appendix. Part one contains information on basic electricity, testing instruments, basic checking steps, inspection, testing and repair of components common to all electric Clarklift trucks.

Part two provides complete information on the operation, testing and repair of the carbon pile, a hydraulically-controlled variable resistor which provides infinitely variable acceleration of electric truck motors.

The appendix includes complete specifications, fold-out wiring diagrams, and detailed adjustment procedures for all Clarklift electric trucks.

The manual is available for $2.00 a copy from Clark's industrial truck dealers or by writing: Manuals and Statistics Department, Industrial Truck Division, Clark Equipment Co., Battle Creek, Mich.

## Revised American Standards

Three newly revised American Standards in the textile field covering test methods for woven fabrics, wool and part wool fabrics and the number of neps in cotton samples have been announced by the American Standards Association, New York City. Developed and published by the American Society for Testing Materials, the revised American Standards include "American Standard General Method of Testing Woven Fabrics (ASTM D39-59), L14.68-1961," "American Standard Methods of Testing and Tolerances for Certain Wool and Part Wool Fabrics (ASTM D462-59), L14.28-1961" and "American Standard Method of Test for Number of Neps in Cotton Samples (ASTM D1446-59T), L14.97-1961."

In L14.68-1961, general methods of testing apply to the determination of dimensions, weight, construction and load-elongation relations of woven textile fabrics.

American Standard L14.28-1961 prescribes methods of testing and tolerances applying to fabrics made wholly or in part of yarn containing wool, but do not apply to blankets, pile fabrics, knitted fabrics, or felts of wool.

L14.97-1961 concerns testing methods for determining the number of neps in cotton samples, and provides a method for selecting a test specimen and the measurement of neps.

Copies of the standards are available at 30 cents each from the ASA, Dept. PR 229, 10 East 40th St., New York 16, N. Y., or the A.S.T.M., 1916 Race St., Philadelphia 3, Pa.

## Standards Pamphlet

The Narrow Fabrics Institute has published its first Standards Pamphlet entitled "Woven Nonelastic Narrow Fabrics: Classification-Nomenclature-Definitions." The pamphlet is intended to improve buyer and seller relations by promoting the use of a common language among the trade so as: to avoid misunderstanding and dispute; to facilitate the preparation of purchase specifications and avoid shipping delays due to the need for classification of purchaser requirements; and to improve distribution of woven nonelastic narrow fabrics by suggesting uses to prospective consumers and new uses to present consumers.

The pamphlet contains a classified and alphabetic list of narrow fabrics by end use applications. It also contains recommended standard definitions of the narrow fabrics industry, as well as of woven nonelastic tape and webbing.

Single copies of the pamphlet are available free; quantities over one copy are available at 25 cents each from the Narrow Fabrics Institute Inc., 11 West 42nd St., New York 36, N. Y.

# Serving The Textile Industry

## Crompton & Knowles Sales, Earnings Up In First Quarter

Crompton & Knowles Corp., Worcester, Mass., reports gains in both earnings and sales for the first quarter ended March 31, compared with the like period of 1960. Net earnings for the quarter were $951,000 on sales of $8.7 million as compared with earnings of $628,000 on sales of $7 million in the first quarter of 1960.

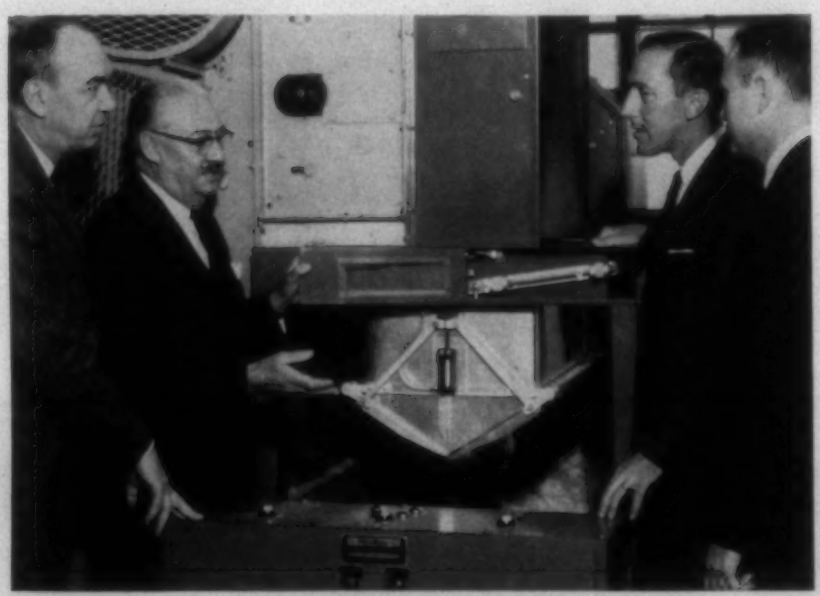
The increase in sales was said to be due to the higher volume of textile machinery shipments as well as the influence of new companies acquired late in 1960. While prospects for textile machinery shipments offer a spotty picture for the rest of the year, the company reported, increased interest is being shown by foreign buyers.

## N. C. State College Receives Hunter Fiber Meter System

Top officials from the James Hunter Machine Co. in North Adams, Mass., and its subsidiary, James Hunter Inc., Mauldin, S. C., visited North Carolina State College School of Textiles recently to inspect the installation of a new Hunter Fiber Meter automatic weighing conversion system in the school's pilot processing laboratory. The equipment, donated by James Hunter, represents a major advance in fiber blending control and will add considerably to the experimental and training value of the school's processing line.

Professor Elliot B. Grover, head of the department of textile technology at North Carolina State, was among the many interested visitors to the Hunter exhibit at the last Southern Textile Exposition, Greenville, S. C. He evidenced great interest in this equipment, and the potential it offered to his department in the process research and development areas. Hunter President James H. Hunter, realizing this, made arrangements for donation of the equipment to the school.

The Hunter Fiber Meter automatic weighing conversion system is installed to receive the output of two conventional feeders in the school's textile laboratory, in a pilot production application that affords a facsimile of opening and blending layouts in many cotton mills. It is equipped with a suitable variable speed drive and a single beater at the end of the conveyor. The new equipment will enable the school to demonstrate the unique accuracy which modern blending automation can provide, and the influence of its effects on subsequent processes. The system will limit blend variation to plus or minus 1%.



Grover, Campbell, Leineweber, Moody

**Prof. Elliot B. Grover and Dean Malcolm E. Campbell of the North Carolina State College School of Textiles discuss the operating principles of the Fiber Meter Automatic Weighing Conversion System donated by James Hunter Inc. with William F. Leineweber Jr. and A. V. Moody of James Hunter.**

## Turner & Chapman Merges With Turner Mfg. Co.

Turner & Chapman of Griffin, Ga., supplier of loom and warper beams and shell and wood rolls, has been acquired by Turner Mfg. Co. of Griffin, manufacturer of store fixtures and laboratory furniture. Facilities of both firms are relocating in a new plant adjacent to Turner's existing plant. No changes in personnel are planned.

## J. E. Sirrine Co. To Build New Headquarters Facility

J. E. Sirrine Co., engineers and architects of Greenville, S. C., has awarded construction contracts for its new modern office building to be located near the Greenville airport. The company announces that completion is scheduled for January 1962 to coincide with its 60th anniversary.

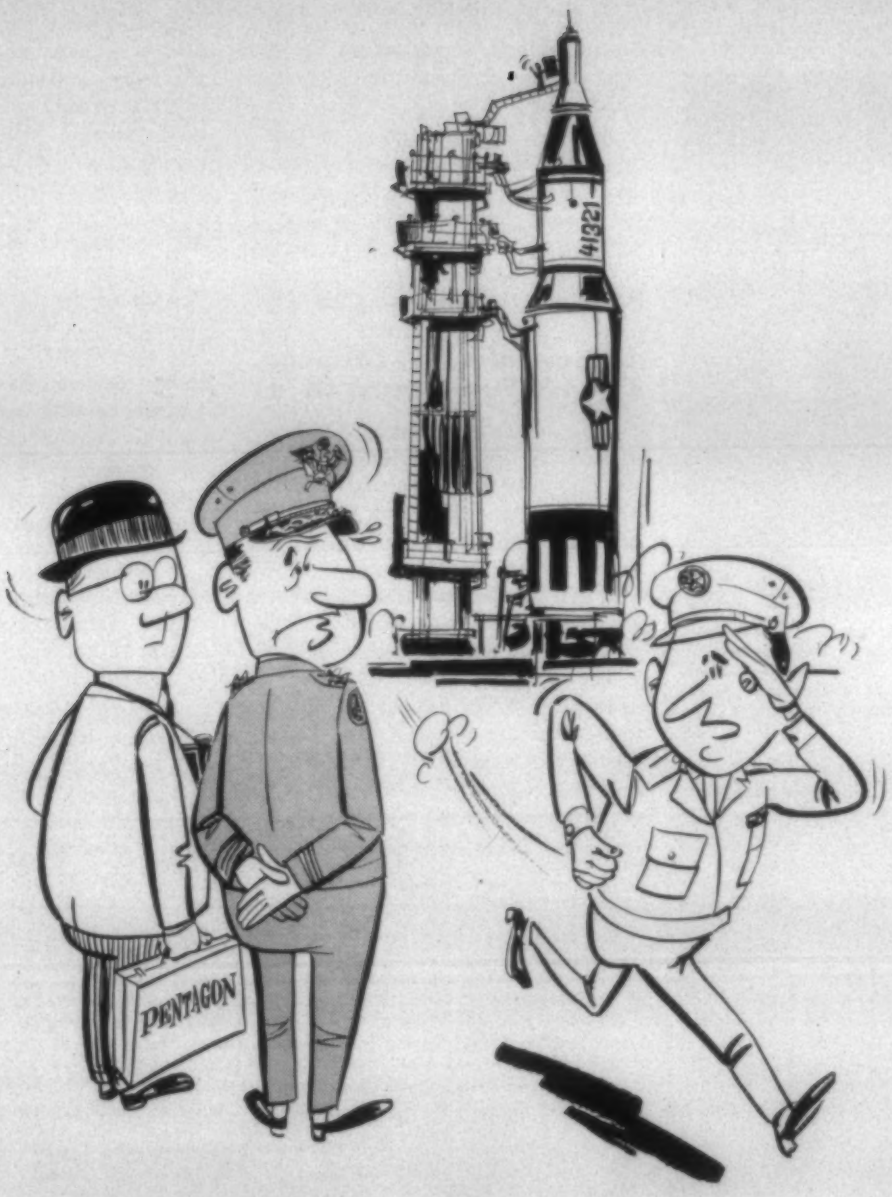
The new Sirrine headquarters will provide 32,500 square feet of air-conditioned office space in a unique two story design. Total construction and site development costs are reported to be in excess of one-half million dollars.

## A. E. Staley Mfg. Co. Opens New Research Center

A new research center has been opened in Decatur, Ill., by A. E. Staley Mfg. Co. The center is dedicated to developing new and more useful products for the textile industry. The 108,000-square-foot center is expected to stimulate further progress, particularly in product developments from the Staley starch fractionation process announced early this year, which opens up a vast new area of corn starch applications and potentials for science to explore.

Construction of the research facility began in 1959. The structure consists of three wings. A four-story central wing houses 138 fully-equipped laboratory units, with modular design for grouping units in work areas and flexibility in future arrangements.

A three-story wing houses administra-




"Hold it . . . he forgot his Dillard note paper!"

**The new Staley Research Center will seek new corn and chemical product developments for the textile industry. This Instron tensile testing unit is but one of many pieces of textile equipment in the new facility.**

tive offices and a technical library of some 10,000 bound volumes plus current scientific literature and information services drawing on central libraries. In the two-story north wing, a cafeteria seats 150, and an auditorium for 225 has on-stage provisions for laboratory demonstrations.

Air-conditioned throughout, the building has individual temperature controls in each room. Four "special climate" rooms are equipped to maintain specified temperature and humidity levels for research work with Staley product applications in the textile and other industries.

## Draper Sales Up, Earnings Down In First Quarter Of '61

Draper Corp. reports moderately lower earnings on slightly increased sales in the first quarter as compared with the first quarter of 1960. With good business marking the beginning of the second quarter, the company reports that it is hopeful that earnings for the six months as a whole will not be too far away from the same period last year.

The company's backlog of orders for looms and knitting units is "higher than a year ago and sales prospects are reported to be good for the balance of the year."

Draper's lower first quarter earnings were said to be restricted by reduced volume in repair parts and supply sales, and in its outside foundry work and chain-saw component sales.

Also, certain non-recurring expenses were needed for plant rearrangements in closing of a plant in Pawtucket, R. I., and the relocation of its products. Starting-up costs of the Southern subsidiary, Marion Industries Inc., and engineering-tooling costs incurred in getting the new X-3 general-purpose loom in production were also involved in these non-recurring expenditures.

The company reports that satisfactory progress is being made in the development of automatic doffing machines.

## Improved Earnings Reported By Maremont Automotive

Maremont Automotive Products Inc. and its subsidiaries had a net income of $601,000 for the three months ended March 31 as compared with $334,000 in the same period last year.

Arnold H. Maremont, president, stated that net sales during the period were $15.7 million as compared to $6.8 million the year previous. As of the end of the first quarter of this year, Maremont owned 91% of the outstanding

common stock of Saco-Lowell Shops. As a result of this stock ownership, the net income of Saco-Lowell Shops, less the minority interest, has been included in the first quarter figures. Sales and income of Saco-Lowell Shops for the first quarter of 1960 were not included because Maremont's stock ownership was less than 51%.

## Orders For Audomac Doffer Top $2 Million For Whitin

Orders on the Whitin Audomac doffer system have already passed the $2 million mark, according to R. I. Dalton Jr., vice-president of sales. The Audomac (for automatic doffing, monitoring and cleaning) is the name being used by Whitin to describe the complete bobbin handling system developed by Deering Milliken Research Corp. for which Whitin holds exclusive license covering manufacturing and marketing rights in the U. S.

In addition to mill orders already placed to date, the Whitin sales division reports a high level of interest by many mills since the original announcement of the licensing agreement was made. The first shipment against these orders is expected to be made in the latter part of this year.

The prototype of the Audomac is operating under actual mill conditions at Drayton Mills, Spartanburg, S. C. There it has successfully doffed over five million bobbins during its testing of some months and has proved capable of reducing mill operating costs and increasing spinning production. The unit is designed to doff an entire spinning frame in any length in less than two minutes with greater precision than manual doffing.

Myron B. Chace has been named project manager for the new doffer system. In his new post, Chace will coordinate the engineering and manufacturing of the Audomac. Chace has been associated with Whitin for over 20 years. For many years he installed and later serviced Whitin-Schweiter Winder installations from Maine to Georgia.

## Fabric Research Lab Sets Up Fiber Spinning Laboratory

An extensive laboratory for the experimental spinning of synthetic fibers has been established at Fabric Research Laboratories, Dedham, Mass.

The new facility, which has been more than two years in planning and construction, is capable of both melt and solvent (dry) spinning which includes nylon, polypropylene, polyethylene, polyester, polyvinyl alcohol, acetate and acrylic fiber spinning methods.

Three types of equipment—two built by FRL and one purchased on an exclusive basis from Chemtex Inc. of New York City—have a capacity from very short runs on single filaments to fully-controlled, limited pilot production of multi-filament yarns. "It is possible with this range of equipment," the company said, "to determine not only that a polymer can or can not be spun into a fiber but also something of the manufacturing variables which contribute so significantly to the cost of a commercial synthetic fiber operation."

Seventy-five percent of the new equipment's capacity will be used on a consulting basis by established fiber producers and by chemical and petrochemical companies who are interested in exploring the synthetic fiber field. FRL is reserving 25% of capacity, however, for self-sponsored, fundamental studies which they intend to publish in the technical literature.

Fabric Research Laboratories is a 19-year-old consulting research organization with a major specialty in synthetic fiber research and a clientele which includes 24 companies with established or potential synthetic fibers.

## Greensboro Loom Reed Co. Plans New Factory Building

Greensboro Loom Reed Co., Greensboro, N. C., is planning a new factory and office building adjacent to its subsidiary, Greensboro Industrial Platers Inc. The two operations will be consolidated after the completion of the new 20,000-square-foot building. Ben L. Smith, consulting engineer, has been retained by the company to prepare plans for the new facility.

## Eastern Airlines Begins Flying-Freighter Service

Eastern Airlines has announced the inauguration of direct all-cargo flights linking Charlotte, N. C., with Chicago, Atlanta and Miami, and by connections with other principal markets and manufacturing centers of the nation.

Eastern's large-capacity, high-speed "flying freighters," according to Henry S. McConnell, district sales manager in


**SIXTEENTH ANNIVERSARY FOR OLIVER D. LANDIS INC.—Members of Oliver D. Landis Inc., Gastonia, N. C., recently marked the firm's 16th anniversary as a supplier to the textile industry. Founded by Oliver D. Landis in 1945 in Charlotte, the firm was moved to Gastonia in 1958 and now maintains headquarters at 1805 West Franklin Ave. Shown *(left to right)* are Horace Short, North Carolina sales representative; Peter Loftis, vice-president and South Carolina sales representative; Oliver Landis, president; Elaine Skipper, Shelbie Childress and Randi Jarrett, secretaries; Stig Hagman, service engineer; Thurman Welsh, Everette Carswell, Grady Gibson, Charles Jordan and J. C. White, machine operators. Two members of the firm—J. D. White, assistant shop foreman, and Ed Devern, machine operator and card clothier—were absent when this picture was taken.**

Charlotte, will provide dependable, regularly scheduled over-night service for shippers and consigners each business day.

The northbound "flying freighter" flight No. 926 will leave Miami at 6:30 p.m., arrive Atlanta 9:01 p.m., leave Atlanta 10:00 p.m., and arrive at Charlotte's Douglas Airport 11:05 p.m. It will depart Douglas Airport 12:01 a.m., and arrive at Chicago's Midway Airport 2:28 a.m.

"Charlotte's industrial and mercantile community has indicated a growing awareness of the advantages of utilizing air transportation, and an immediate need for increased northbound air-cargo capacity," McConnell said. The demand is for a type of service which cannot be provided with our ordinary dual-purpose, passenger-cargo aircraft.

"The 'flying freighters', have wide loading doors, reinforced flooring, and other special equipment for handling large objects, and are designed to meet the special needs of those who want speed of delivery combined with reliability of schedules and safe handling of their shipments."

## American Enka Improves Earnings In First Quarter

American Enka Corp., Enka, N. C., reports net income of $606,000 on sales of $22.5 million for the first 12 weeks of 1961 as compared with income of $515,000 on sales of $23.6 million in the comparable period of 1960. The company reported that although earnings are moderately improved they are still not satisfactory.

The increase in net income was credited to economies put into effect during the last quarter of 1960. The company reports that the expansion of its nylon facilities are moving forward on schedule. Capacity has been steadily increasing and income from the nylon division contributed materially to the improved earnings in the first quarter of 1961.

## Scott Testers Completes New Plant Facilities

Scott Testers (Southern) Inc. of Spartanburg, S. C., has announced that new plant facilities are now completed which double the operating capacity of the company's five-year-old building. The firm is a subsidiary of Scott Testers Inc., Providence, R. I., producer of equipment for physical testing of textiles and other basic industry products.

The expanded facilities are designed to provide a more adequate working area for the plant's function of overhaul and repair of Scott Testers equipment. The expanded plant will continue to

serve as Scott Testers sales and service headquarters for the Southeastern U. S.

## American Viscose Corp. Sees Improving Economic Picture

Gerald S. Tompkins, president of the American Viscose Corp., predicts that second quarter sales for the company will be at the same level as the first quarter, but will increase in the third quarter. Speaking at the annual meeting of stockholders he also pointed out that the textile industry appears to have reached the bottom of its cycle and is now beginning to move up again.

In discussing the importation of low-priced foreign rayon staple, he said, "We have continually sought government relief, and only last month the Tariff Commission rendered a split-decision verdict against tariff relief for the rayon industry. We are requesting a re-hearing before the Tariff Commission."

Dr. Frank H. Reichel, chairman of the board, said the corporation is in excellent financial condition, and that all Avisco products hold good market positions.

Net sales for the first quarter totalled $50.3 million compared with $54.8 million for the same quarter last year. Net earnings were $1.8 million which includes a dividend of $816,000 from Monsanto Chemical Co.

## Chemstrand Corp. Plans Data Processing Center

Chemstrand Corp., New York City, has announced plans to construct a data processing center in Greenville, S. C. The processing center will be built on a 4½-acre site in Greenville's McAllister Plaza, located in the east central part of the city.

The Greenville site was selected by Chemstrand because of its importance and proximity to all major transportation, manufacturing and distribution centers in the South's vast textile industry including the company's other operations in Greenwood, S. C.; Decatur, Ala.; Pensacola, Fla.; and its subidiary Chemstrand Research Center Inc. at Durham, N. C.

The center, which will employ about 50 persons, is expected to be completed in early 1962.

## Rohm & Haas Reports Drop In Sales And Earnings

Rohm & Haas Co., Philadelphia, Pa., had a net income of $4 million on sales of $51.8 million in the first quarter ended March 31. This compares with income of $5.9 million on sales of $56.3 million in the first quarter of 1960.

The company noted that sales had increased slightly over the fourth quarter. Although sales for the current year had been originally forecast as being about the same as 1960, indications are now that the 1961 net income will not reach the level of last year unless there is a very sharp upturn in business.

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*Roving Bobbins up to*

**14 x 7"**

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## THE TERRELL MACHINE COMPANY, INC.

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textile bulletin

VOL. 87 JUNE 1961 NO. 6

# Cotton Properties And Processing Discussed At S.R.R.L. Utilization, Research Conference

## MECHANICAL PROCESSING IMPROVEMENTS AND TEST RESULTS ARE REVIEWED FOR VISITING MILL MEN

MORE than 200 people from all phases of the textile industry gathered at New Orleans, La., May 1-3 for the U.S.D.A.'s Cotton Utilization Conference. Featured speakers at the two-day event were members of the Southern Regional Research Laboratory.

The conference was divided into two major categories—fiber properties and mechanical processing and chemical modification and finishing. The first of these was concerned with such topics as cotton consumption; cotton machinery developments; drying and cleaning effects on fiber properties; blending of fibers; and the effect of short fibers on yarn and fabric properties and spinning performance.

The chemical modification and finishing part of the conference dealt primarily with wash-wear finishes. Other topics discussed included: flame resistant cottons; weather and rot-resistant cotton products; and costs of chemically modified cottons.

### Consumption Of Cotton Has Surged

Mechanical processing of cottons into yarns and fabrics has advanced in every area from the harvesting of cotton to the finished product, R. J. Cheatham, chief of the cotton mechanical laboratory at S.R.R.L., pointed out. He said that these improvements have resulted in an increase in the consumption of cotton from 4% of the total fibers used in 1800 to more than 47.5 million bales in 1960-61. Factors that influenced this tremendous surge included the betterment of such properties as quality, staple length, trash content and color. He pointed out, as a comparison, that from 1928-1930, the staple length of approximately 57% of the crop was less than $\frac{29}{32}$-inch, whereas from 1955-1960, it was less than 9%.

The "bread and butter" cottons—1 inch to $1\frac{1}{16}$ inch—have increased from only 17% of the crop in 1928-30 to some 71% through 1955-60.

To continue the dominance of cotton as the main textile fiber some immediate problems must be solved, Cheatham pointed out. These include:

(1) The development of precise and quick methods of measuring fiber properties so that present cottons can be selected and blended properly to obtain the best processing efficiency and quality.

(2) Determining what effects fineness and length have on the spinning properties of a fiber and means to calculate the compensation needed when one of the properties is out of line.

(3) New means to remove short fibers and trash without damaging good fibers.

(4) Making investigations designed to obtain optimum results with present cottons, utilizing the properties that need to be improved upon.

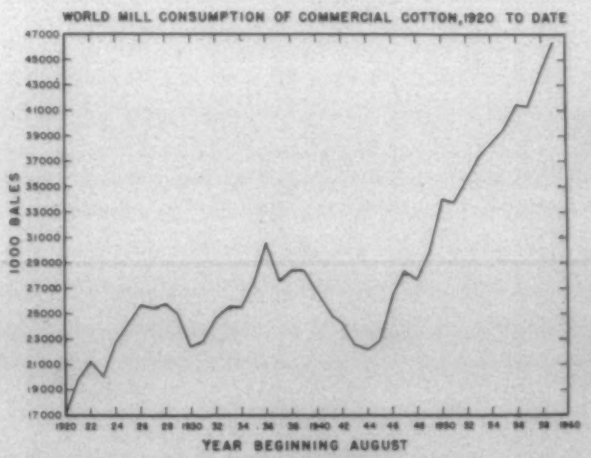
### S.R.R.L. Mechanical Processing Improvements

A member of the S.R.R.L. mechanical processing department, Ralph A. Rusca, outlined the laboratory's machinery development during the last few years.

Starting with the opening line, he pointed out that a proposed system in which the function of each machine in the opening line is integrated and synchronized with each of the other machines has led to the development of the Bale-Breaker-Blender system that is designed to open and blend cotton in any proportion up to 20 bales.

Rusca said that the Bale-Breaker is still under development at present but that the Opener-Cleaner and a Carding Cleaner type finisher picker are commercially available.

The familiar S.R.R.L. Opener-Cleaner has an overall trash




**World consumption of cotton has surged forward from only 17 million bales in 1920 to an all-time high last year of some 48.2 million bales. Consumption for 1960-61 is estimated at 47.5 million bales.**

**Effect of Opener-Cleaner on Cleaning Efficiency and Waste[1]**

| Quality of Cotton | Cleaning Efficiency, % | Waste Removed, % | Trash in Waste,[2] % | Fiber in Waste, % |
|---|---|---|---|---|
| M grassy, 1-1/16" | 23.8 | 0.94 | 76.7 | 23.3 |
| M, 1¼" | 31.7 | 1.11 | 85.9 | 14.1 |
| LM, 1-1/6" | 25.0 | 2.13 | 89.4 | 10.6 |
| LM, 1-1/32" | 34.1 | 2.19 | 85.2 | 14.8 |
| SGO, 31/32" | 37.9 | 4.22 | 88.4 | 11.6 |
| SGO, 1-1/32" | 43.2 | 4.37 | 88.1 | 11.9 |

Cleaning efficiency = (trash in cotton fed − trash in cotton delivered) / trash in cotton fed

[1]Determined with a Shirley Analyzer.
[2]Includes invisible loss.

**Different grades of cotton have been processed through the S.R.R.L. Opener-Cleaner producing some figures that might bear looking into.**

removal efficiency of some 35-40% at approximately 1500 lbs./hr. The machine has four wire-wound processing cylinders inclined backwards and incorporating teeth that are pointed forwards. A fifth cylinder has teeth pointed toward the feeding end of the machine. These are designed to tear the cotton into small tufts.

A second set of cylinders removes these opened tufts from the initial cylinders, and in conjunction with another smaller set of combing cylinders and a set of textile-type grid bars, cleans the fibers.

The fibers are then doffed from the cylinders by soft revolving strip brushes which also serve as centrifugal fans. This doffing sequence is planned to further open and clean the fibers.

The fibers are then conveyed by air currents through trumpet-shaped ducts. These ducts spread the cotton into a wide, thin sheet.

Attached and incorporated with the Opener-Cleaner is an Aerodynamic Cleaner that utilizes air currents to continue opening and cleaning of the stock. As the fibers leave the trumpet-shaped ducts, the air currents abruptly change direction. This change causes the lighter fibers to change direction also, allowing the heavier trash and motes to continue forward to be collected in a waste bin.

Explaining the operation of the Carding-Cleaner Picker, Rusca said that it was built as a modification for standard cotton pickers and increases the cleaning efficiency of this process by some 400%.

The picker conversion consists of replacing the blade or Kirschner beater with a wire-wound cylinder. The pedal evener motion has been replaced by a wire-wound "anti-pluck" feed roll which is unique in design. It has wire twisted around the feed roll in two spiral grooves so that the teeth in one groove are traveling in the opposite direction from the others. The forwardly inclined teeth convey the fibers from the blending reserve to the carding-beater section.

As the carding-beater strips the feed roll, the cotton is combed across the backwardly inclined teeth and is thoroughly opened. In this section a set of four triangular grid bars are provided to increase cleaning.

The lint lost through the grids is minimized by a lint recovery system that incorporates a very light air stream across the top of the waste box to catch the falling lint. The recovered fibers are then deposited on the incoming cotton to be reprocessed.

The feed system has been improved by two methods, Rusca pointed out. One is that the belt-shifting mechanism controlling the feed to the blending reserve has been replaced by a fast-acting pneumatic clutch and the second is that the rake-type control in the blending chute has been replaced by a light aluminum gate directly coupled to a mercury switch.

Evaluation of the Opener-Cleaner, Carding-Cleaner integrated system indicates that the two machines will remove approximately 70 to 80% of all foreign matter present. When this waste is broken down into separate categories, it shows these percentages: 85% trash; 15% fiber, with some 60% of the fiber being shorter than one-half inch.

**Waste Removal by the Carding Cleaner Unit**

| Variety of Cotton | Cleaning Efficiency,[1] % | Waste Removed, % | Lint in Waste,[1] % |
|---|---|---|---|
| Acala 4-42 | 45.2 | 1.18 | 9.8 |
| Paymaster | 39.5 | 0.77 | 11.4 |
| Deltapine 15 | 49.9 | 1.44 | 13.1 |
| Average | 44.9 | 1.13 | 11.4 |

[1]Determined with a Shirley Analyzer.

**S.R.R.L. has combined a carding-opener unit with a standard picker by replacing the blade or Kirschner beater section and incorporating a new feed system. Here are some of the results from three different varities of cotton processed through the machine.**

## Granular Card

The Granular Card (T.B., March 1961), Rusca pointed out, is a standard flat top card that has been converted to operate without flats. Flats are replaced with an air-tight cover that has an aluminum oxide carding surface closely spaced to the main cylinder.

Other changes from the standard card include a small metallic wire roll installed in conjunction with the lickerin to preopen the fiber tufts. A modified lickerin cover that is designed to improve cleaning at the mote knives is also available.

Some of the results that have been obtained with the card include the elimination of flat waste; a considerable decrease in dust and fly; a reduction in card weight by some 800 lbs.; and the reduction of power requirements by ⅛ h.p. There is a slight decrease in neps in the web and a possibility of a decrease in yarn appearance grade.

## Yarn Spinning Apparatus

Rusca said that exploratory research has been completed on an original idea for spinning without the conventional ring and traveler. An experimental model of the machine has produced a high-twist medium-coarse yarn at rates equal to those of standard spinning frames. The model has demonstrated the possibility of producing yarn packages of almost unlimited size and shape by enabling the usual separate winding process to be incorporated into the spinning machine.

## Drying And Cleaning Effects On Cotton

The removal of moisture and trash from cotton before making a marketable product requires heat and mechanical agitation, James N. Grant of S.R.R.L., pointed out. The ease with which this can be done and the resulting fiber damage is linked to the amount of moisture within the fiber itself.

Grant gave the following results obtained when cotton was subjected to heat and processing at S.R.R.L.

### The Effects of Gin Cleaning of Dry Cottons on Short Fiber content and End Breakage during Spinning

| Overhead Cleaning | Lint Cleaners | Fibers Less Than ½ inch[1] (%) | Ends to Break [2] |
|---|---|---|---|
| Simple | 0 | 11.6 | 76 |
| | 1 | 12.0 | 85 |
| | 2 | 12.9 | 96 |
| Moderate | 0 | 10.8 | 84 |
| | 1 | 11.7 | 100 |
| | 2 | 12.6 | 117 |
| Elaborate | 0 | 11.6 | 168 |
| | 1 | 13.1 | 139 |
| | 2 | 11.4 | 245 |

[1]Lint from bales having lint slide moisture of 2-3%.
[2]End breakage per thousand spindle hours for 5,000 hour tests on 40/1 filling yarns with spindle speeds of 11,000 r.p.m.

**Several variations of ginning with simple, moderate and elaborate overhead cleaning units were tested to determine the effects of ginning dry cotton on short fiber content and end breakage.**

(1) In ginning, a temperature gradient exists between the inner and outer layers of fibers. The temperatures of the fibers rapidly approach that of the outer air and the fibers quickly lose moisture. Both the loss in moisture and the increase in temperature cause the fibers to temporarily lose some 20 to 50% of their strength. However, after the fibers regain their moisture, they have strengths essentially equal to those before heating.

(2) Fiber breakage during mechanical tests is another property which indicates that the fiber structure is altered by drying with excess heat. There are several factors which contribute to this greater breakage. The first of these is the reduction of moisture content. Others are the degradation of the cellulose and the increase in rigidity by the formation of new stable molecular aggregates or crystalline regions.

(3) Waxes and breakages of the cellulose chains are effected by heat-drying at the cotton gin. Although adversely affected, these properties are very difficult to evaluate as to spinning performance, Grant said. He pointed out that one possible explanation for poor spinning qualities of overdried cottons could be the combined effect of changes in many properties such as kinkiness, surface and length distribution. When the lint has been dried to an extremely low level prior to ginning, the yarn breakage during spinning increases with seed cotton cleaning and with the extent of lint cleaning in textile processes.

(4) Dyeing characteristics could be significantly affected by new crystalline regions that may be formed due to overheating. Slight differences in shade between the dried and undried cottons can be detected when the most sensitive type of dye is used on the greige fabrics. However, these differences are very slight and disappear almost completely upon scouring.

Grant pointed out that the quantity of short fibers in experimentally ginned cottons is directly related to environmental conditions and variety, with environment being the predominant factor. However, varieties producing lint of essentially equal staple length may differ widely in the quantity of short fibers in the ginned lint. Only within a variety is a relationship evident between short fiber content and length, fineness or maturity, said Grant.

### Yarn Appearance Grade as Affected by Short Fiber Content Over a Range of Twists and Yarn Numbers

| Nominal Short Fibers Content | 14/1 Yarn | | | 22/1 Yarn[1] | | 36/1 Yarn | | |
|---|---|---|---|---|---|---|---|---|
| | Twist Multiplier | | | | | | | |
| | 3.50 | 4.50 | 5.75 | 3.50 | 4.50 | 3.50 | 4.50 | 5.75 |
| % Wt. Less Than 3/8" | | | | | | | | |
| 5 | B | B+ | B+ | B | B+ | C+ | B | B |
| 8 | B | B | B | C | B− | C− | C | C+ |
| 10 | B | B− | B− | C+ | C− | D+ | C | C+ |
| 13 | C− | C− | C | D | D | [2] | D | D |
| 15 | D+ | D+ | C | D | D | [2] | D− | D |
| 19 | D | D | D | [2] | D | [2] | [2] | [2] |

[1]5.75 twist multiplier not spun due to insufficient material.
[2]Impractical to spin due to excessive ends down rate.

**Systematic blending has been almost forgotten in the trend toward one-process operation and high drafts. These are some of the results that can be obtained by blending certain cottons by percentages.**

### Results Of Short Fiber Tests

John D. Tallant, S.R.R.L., said that where short fibers are defined as those fibers which are ⅜-inch and shorter rather than the conventional ½-inch, they are not likely to break but rather to slip when put under stress in a yarn.

He pointed out several results of tests that had been run at S.R.R.L.

(1) Increases in short fiber content degrade yarn strength, both skein and single strand; yarn appearance; fabric appearance; and virtually all other properties.

(2) Increasing levels of short fiber content, while decreasing the maximum strength available from a cotton, doesn't appear to affect the yarn twist required for maximum strength.

(3) Spinning tests show that the relationship between spinning efficiency and short fiber content for print cloth yarns is complex and strongly influenced by spindle speed, yarn size and twist. Increases in short fiber content seriously decrease spinning performance. It was found that once a cotton of a given level of short fiber content exceeds an ends-down

**Fisher, Heard, Jones**

**Discussing the day's program for the S.R.R.L. conference are Dr. C. H. Fisher, director of the Laboratories; Dr. M. Earl Heard, vice-president of research, West Point (Ga) Mfg. Co. and general chairman of the conference; and Louis L. Jones Jr., president of the Canton (Ga.) Cotton Mills and first day chairman of the conference.**

rate of about 20 e.d.p.t.s.h., end breakage increases exponentially with increases in spindle speed.

Tallant said that for a mill seeking to spin fine or low twist yarns at maximum spindle speeds, the results of the tests show that there are two avenues of escape—selecting cottons of low short fiber content initially or seeking means to reduce the short fiber content.

Tallant believes that the important criterion in the processing of any staple length cotton is not so much the percentage of short fibers as it is the excessive, normal or low amounts for a specific length.

### A Disappearing Art

Blending has been greatly reduced in the textile mill through the use of one-process systems which emphasize drafts and de-emphasize doublings and "sandwich blending," according to Louis A. Fiori, S.R.R.L. Technological advances in the preparatory processes of mixing, opening and cleaning have not kept pace with the spinning processes. These factors have caused blending to become a somewhat haphazard operation without controlled conditions. Sound principles of blending must be instigated during the raw stock preparation because most post-preparatory equipment does not function as a blender, Fiori pointed out.

### Fineness

There are several ways that controlled blending may take place, he emphasized. The first of these is by fineness measurements. It has been found that blends of different fiber diameters will spin as well as a cotton that is not blended but has the same average fineness as the blend. The blended and controlled cottons have essentially the same nep potential, skein count strength and require the same twist for maximum strength. There are limitations to these tests, the speaker pointout. He said that when the average fineness exceeded the 4.0 level, the controlled cottons did a much better job in processing.

### Length

The second method of blending is by fiber length. Test results of blending Deltapine 15 and Pima S-1 show that if properly done, one can blend cotton fiber length to a projected fiber distribution. The reduction of short fibers through extraction is costly and can be compensated for through blending, said Fiori.

**Comparison of Fiber Length Properties of Deltapine 15, Pima S-1, and Selected Blends of These Cottons**

| Fiber Length Properties[1] | Deltapine 15 / Pima S-1 100% 0 | 75% 25% | 50% 50% | 25% 75% | 0 100% |
|---|---|---|---|---|---|
| Upper Quartile Length (in.) | 1.23 | 1.25 | 1.28 | 1.37 | 1.34 |
| Mean Length (in.) | 0.97 | 1.02 | 1.06 | 1.16 | 1.14 |
| Fibers of 3/8" or Shorter | 6.03 | 5.25 | 3.23 | 2.11 | 2.31 |
| Coefficient of Variation (%) | 35 | 33 | 28 | 26 | 25 |

[1]Fiber length properties measured from raw stock cotton processed through a small-scale table model blender.

**Increasing the percentage of short fibers in a yarn seriously degrades appearance, strength and virtually all other properties. However, short fiber content, while decreasing maximum strength, does not affect yarn twist required for this strength.**

Modern long drafting machinery, he believes, is relatively insensitive to length differences, so the inclusion of long fibers in a blend should not seriously affect mechanical processing organizations.

### Fiber Strength

The third method of blending is by fiber strength. Tests have shown that a blend of 50% strong cotton fibers with 50% weak ones gives a mathematical average of the two components. Yarn strength increases in proportion to the percentage of stronger fibers in the blend and this holds true in all finished fabrics with the exception of resin coated ones. Fiori pointed out that this meant that through proper blending, any desired average level of fiber strength can be obtained and translated into stronger yarns and fabrics.

### Volume

Another system of blending is by volume. Several factors, Fiori noted, enter into this system: (1) The height of the cotton in the hopper must be kept at a constant level. (2) The density of the cotton must be constant. (3) The rate of feed must be constant for all fiber components and for the overall mass of fibers.

### Weight

Weight is another method of blending in raw stock machinery. Here the hopper feeders are equipped with automatic weight pans which regulate the weight of the stock fed from the feeder. These pans discharge the stock simultaneously at predetermined intervals to a sandwich forming common conveyor belt. To operate this system efficiently, small tufts of fibers must be fed to the hopper feeder, which results in a constant density of the cotton.

### Sandwich Blending

There are two types of "sandwich blending" to be taken into consideration in blending. The first of these is the simple sandwich. This system incorporates a conveyor belt arrangement and stock is received from a series of hopper feeders, whether by volumetric or weight control.

The second sandwich method of blending is the multiple sandwich. Here the materials are dropped on a conveyor system and transported to a massive blending bin. The stock is then mixed or "cut through" in "sandwich" fashion before being delivered to the next process.

### Preblending

To control differences in fiber properties among bales of cotton, Fiori said, the practice of blending large numbers of bales and then rebaling them has been undertaken by some cotton merchants and mills. This system has the distinct advantage of collectively averaging out all the fiber properties, thus reducing the variation between nonblended bales of stock. This low variation between bales automatically reduces some of the objectionable influences of operator bias and volumetric feeding.

Fiori outlined these prerequisites for preblending: (1) include large numbers of bales to take care of the "time-space" factor; (2) use the principle of "blending by weight"; (3) break up the cotton into tufts of consistent density; and (4) use a minimum of cleaning equipment to avoid fiber damage.

# 1960 Domestic Broad Woven Fabric Production Dropped 391.5 Million Linear Yards Below 1959

## U. S. PRODUCTION 4.4% LESS THAN TEN-YEAR AVERAGE; PER CAPITA CONSUMPTION ALSO HITS A NEW RECORD LOW

PRODUCTION of woven textiles of cotton, man-made fiber, wool and silk in the U. S. in 1960 totalled 12,023 million linear yards, down 3.2% from the revised 1959 output of 12,414 million, according to figures compiled by The Association of Cotton Textile Merchants of New York. The figure was 558 million linear yards or 4.4% less than the 1950-59 ten-year average production of 12,581 million (see chart on next page).

Woven textile production was at an unusually low point for the year due primarily to curtailments in the last half, and with the exception of 1958 was the lowest of the decade. Otherwise, in the 20-year history of this particular statistical series, only 1949, when U. S. population was 31 million less than in 1960, and the closing war years of 1944 to 1946 when the nation numbered 42 million fewer consumers, showed less production of cloth.

Production per capita of population for 1960 set a new low mark of 66.55 yards against 70.04 for 1959; 66.81 for 1958; and 76.93, the ten-year average.

Although total production was on the low side, and most major divisions were down from the previous year, 1960 showed some advances and in fact new production highs in a few areas.

In cotton goods total production of 9,328 million linear yards was down 276 million for the year, but held at better than the 1958 level. The most noteworthy performance, reflecting a continuance of a long term upward trend in combed yarn goods, was shown by fine cotton fabrics which set a new all-time high in 1960 of 1,661 million linear yards, a gain of 52 million from the previous year.

The major print cloth division, however, at 3,307 million lost 76 million yards and registered a new low since 1949.

Colored goods fell to a new all-time low point of 455 million yards, off 64 million for the year, although it should be noted that the Government classification here covers mainly carded colored goods, considerable combed dyed yarn fabrics being reported in the fine goods grouping. Other major cotton goods divisions were all down for the year although not to as low a point as in 1958.

In man-made fiber fabrics excepting rayon and acetate goods, production continued its almost constant annual increase which has carried these goods from their pilot stage around World War II to a new high for 1960 of 939 million yards or well on the road to the billion yard level. Their gain from 1959 was 102 million yards or 12.3%.

But rayon and acetate fabrics at 1,428 million were at a new low for the 20-year period. Filament yarn fabrics were at a new record low, spuns the lowest since 1946, combination fabrics lowest since 1941. Pile, upholstery, drapery, tapestry and tie fabrics, and the "all other" classification of rayon-acetate goods—while off for the year—held at better than the 1958 level.

Woolen and worsted woven goods showed 283 million yards for the year, off 8 million from 1959.

Automobile tire cord fabric not included in the broad woven goods data dropped to 418 million pounds for the year, off 51 million pounds, with both the cotton and man-made fiber components registering losses.

Production per capita, excluding tire cord and tire fabric, is given below, without adjustment for export-import. (The pre-war 1937 and 1939 data are from industry sources; 1941 and later based on Bureau of the Census figures.)

**U. S. Broad Woven Goods Production Per Capita (Linear Yards)**

| | | | |
|---|---|---|---|
| **1937 est.** | 78.64 | **1951** | 83.49 |
| **1939 est.** | 76.66 | **1952** | 77.44 |
| **1941** | 94.93 | **1953** | 81.09 |
| **1942** | 98.56 | **1954** | 77.07 |
| **1943** | 93.36 | **1955** | 79.36 |
| **1944** | 84.97 | **1956** | 76.89 |
| **1945** | 77.42 | **1957** | 70.78 |
| **1946** | 81.50 | **1958** | 66.81 |
| **1947** | 85.84 | **1959** | 70.04 |
| **1948** | 84.60 | ***1960** | 66.55 |
| **1949** | 73.22 | | |
| **1950** | 86.30 | | |

*Preliminary

# '60 Was A Great Textile Year—For Importers

THE Northern Textile Association has compiled a ten-page pamphlet that top management in every mill in the country should make "must reading" for all employees.

The booklet, in easy-to-read chart form, points out that U. S. imports of textile manufactures increased ten times since 1948 and more than doubled since 1958. In 1948 imports were less than 1% of domestic production; in 1958 the ratio was 3.5%; and in 1960, 7.1%.

Manufacturers of certain types of goods were hit harder than others by imports, the report points out. In 1960 broad-woven textile imports were 15% of domestic production, carpet imports were 24% of domestic production and silk imports reached the staggering total of 200% as compared with domestic production.

The year '60 was one of big expansion for exporters to the U. S. The booklet points out that in that year fabric imports

# TEN YEARS OF BROAD WOVEN FABRICS

Data on annual production of broad woven fabrics assembled by The Association of Cotton Textile Merchants of New York from reports of the Bureau of the Census on Cotton Broad Woven Goods; Man-Made Fiber Broad Woven Goods; and Woolen and Worsted Woven Goods. Data for 1960 are from preliminary Census reports. Production is in linear yards (except tire fabric and cord reported in pounds).

| | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | THOUSANDS OF LINEAR YARDS | | | | | PRELIMINARY |
| COTTON BROAD WOVEN GOODS (except tire fabrics) TOTAL PRODUCTION | 10,135,969 | 9,514,732 | 10,203,037 | 9,890,948 | 10,171,062 | 10,317,071 | 9,533,764 | 8,973,704 | 9,604,678 | 9,328,279 |
| Duck and allied fabrics | 362,777 | 366,081 | 263,223 | 239,819 | 242,087 | 255,471 | 219,692 | 200,212 | 223,462 | 204,575 |
| Sheeting and allied coarse and medium yarn fabrics | 2,836,253 | 2,416,939 | 2,556,855 | 2,493,582 | 2,585,656 | 2,668,090 | 2,507,770 | 2,310,774 | 2,600,701 | 2,482,295 |
| Print cloth yarn fabrics | 3,709,429 | 3,638,293 | 3,956,483 | 4,039,169 | 3,967,718 | 3,888,122 | 3,736,448 | 3,339,005 | 3,382,849 | 3,306,789 |
| Colored yarn fabrics | 779,053 | 827,362 | 862,816 | 738,617 | 698,691 | 625,328 | 533,051 | 484,951 | 519,731 | 455,270 |
| Fine cotton fabrics | 1,233,133 | 1,112,721 | 1,307,928 | 1,244,336 | 1,376,513 | 1,517,982 | 1,357,002 | 1,453,437 | 1,608,680 | 1,661,039 |
| Napped fabrics, blankets, blanketing | 408,682 | 297,790 | 290,316 | 233,143 | 240,600 | 240,844 | 209,200 | 195,750 | 205,870 | 205,196 |
| Towels, towelings and dish cloths | 421,607 | 428,358 | 475,086 | 455,088 | 502,298 | 562,638 | 540,739 | 534,849 | 571,626 | 547,829 |
| Other woven cotton fabrics, specialties | 385,035 | 427,188 | 490,330 | 447,194 | 557,499 | 558,596 | 429,862 | 454,726 | 491,759 | 465,286 |
| RAYON AND ACETATE BROAD WOVEN FABRICS, TOTAL | 2,083,836 | 1,851,673 | 1,903,233 | 1,730,904 | 1,928,162 | 1,626,047 | 1,463,894 | 1,654,120 | 1,618,403 | 1,428,044 |
| 100 per cent filament rayon and/or acetate fabrics | 1,296,967 | 986,702 | 1,051,844 | 848,310 | 887,373 | 790,113 | 691,188 | 697,572 | 666,537 | 636,119 |
| 100 per cent spun rayon and/or acetate fabrics | 407,601 | 407,273 | 442,129 | 445,485 | 528,185 | 351,474 | 281,820 | 419,714 | 308,941 | 215,069 |
| Combination filament and spun rayon and/or acetate fabrics | 190,238 | 227,074 | 138,594 | 118,876 | 109,184 | 107,776 | 107,192 | 121,811 | 121,437 | 103,284 |
| Pile, upholstery, drapery, tapestry and tie fabrics | 36,496 | 50,119 | 63,442 | 87,906 | 118,407 | 114,889 | 144,413 | 156,804 | 190,185 | 182,370 |
| All other rayon and/or acetate mixtures including blanketing | 152,534 | 180,505 | 207,224 | 230,327 | 285,013 | 261,795 | 239,281 | 258,219 | 331,303 | 292,202 |
| OTHER MAN MADE FIBER FABRICS* | 265,575 | 400,634 | 463,954 | 558,631 | 629,197 | 602,229 | 783,220 | 694,467 | 836,277 | 939,252 |
| WOOLEN AND WORSTED WOVEN GOODS | 375,400 | 351,359 | 335,914 | 284,231 | 317,586 | 324,358 | 294,490 | 271,340 | 310,831 | 283,295 |
| SILK, PART SILK, OTHER FABRICS† | 26,461 | 41,998 | 38,065 | 53,325 | 69,872 | 61,377 | 42,190 | 34,899 | 44,289 | 44,100 |
| TOTAL PRODUCTION OF BROAD WOVEN GOODS (except tire cord and fabric) | 12,887,241 | 12,160,396 | 12,944,203 | 12,518,039 | 13,115,879 | 12,931,082 | 12,117,558 | 11,628,530 | 12,414,478 | 12,022,970 |
| | | | | | THOUSANDS OF POUNDS | | | | | |
| TIRE CORD AND FABRICS, TOTAL | 603,913 | 530,980 | 521,007 | 418,338 | 524,354 | 449,093 | 448,700 | 387,065 | 469,634 | 418,439 |
| Cotton tire cord and fabrics | 289,160 | 139,001 | 73,216 | 59,890 | 68,261 | 51,419 | 42,281 | 37,520 | 39,633 | 29,957 |
| Man-made tire cords and fabrics | 314,753 | 391,979 | 447,791 | 358,448 | 456,093 | 397,674 | 406,419 | 349,545 | 430,001 | 388,482 |

* Includes Nylon, acrylic, polyester, Saran and polyethylene, and textile glass fiber fabrics and mixtures.

† Silk and silk mixtures only through 1953; includes paper yarn and miscellaneous as follows: 1954, 10,917; 1955, 27,165; 1956, 20,296; 1957, 14,265; 1958, 13,436; 1959, 15,640; 1960, 15,650.

**Textile Import Totals**

| | Millions of Sq. Yds. 1948 | 1958 | 1960 | % Increase 1958-60 | % Increase 1948-60 |
|---|---|---|---|---|---|
| Cotton Mfrs. | 64 | 456 | 1,008 | 121% | 1,475% |
| Wool Mfrs. | 26 | 55 | 111 | 102 | 327 |
| Wilton & Velvet Carpets | 1 | 5 | 8 | 60 | 700 |
| Man-Made Fiber Mfrs. | 8 | 49 | 100 | 104 | 900 |
| Silk Mfrs. | 32 | 65 | 83 | 28 | 159 |
| TOTAL | 131 | 630 | 1,310 | 108% | 900% |

were 2½ times greater than in 1958. In the same period, imports of textile products rose by two-thirds and yarn imports jumped 800%.

Not only was there a sharp increase in actual imports of textiles and textile products in 1960, but there was a marked increase in the number of countries carving out a portion of the American market for themselves. The countries making the greatest gain percentagewise were those that exported relatively little textiles to the U. S. in past years, such as Spain, Egypt, India, France, Formosa, Pakistan and Korea. To give an idea of the size of the increase, the new publication points out that imports from Spain, Egypt, France and Portugal increased 7,100% in the period from 1948 to 1960. Hong Kong, now the major foreign supplier of cotton textiles to the U. S. had an increase of 1,475% in the same period. Japan, the second largest supplier of cotton goods showed an increase of 1,786% from 1948 to 1960.

The report also pointed out that Italy has taken the lead in the exporting of wool fabrics to the U. S. with an increase of 1,600% in yardage from 1948 to 1960. This gives Italy a 31% share of the wool textile imports in 1960. While Italy has eclipsed such countries as the United Kingdom and Japan as sources of wool imports, both these countries showed overall gains in exports to the U. S.

A very illuminating chart in the publication gives the comparative hourly earnings of workers in various countries as compared with the U. S. worker's earnings. Foreign workers' wage scales range from Hong Kong's five cents an hour to the United Kingdom's top 55 cents an hour. Using the U. S. wage as 100% some other wages would score as follows: Hong Kong—3%, Italy—18%, Japan—11%, United Kingdom—35%, West Germany—34%.

**Textile Industry Average Hourly Earnings In Selected Foreign Countries And The U. S. 1958-1960 (In United States Dollars)**

| Country | Date Of Earnings | Avg. Hrly. Earnings | Comp. U.S. Avg. Hrly. Earnings | Ratio Of Foreign To U.S. |
|---|---|---|---|---|
| Belgium | Oct. 1950 | $ .51 | $1.56 | 33% |
| France | April 1959 | .39 | 1.57 | 33 |
| Formosa | 1959 | .05 | 1.57 | 3 |
| Hong Kong | April 1959 | .10 | 1.52 | 7 |
| India | April 1959 | .12 | 1.52 | 8 |
| Italy | Sept. 1950 | .28 | 1.59 | 18 |
| Japan | 1959 | .17 | 1.57 | 11 |
| Korea | 1959 | .06 | 1.57 | 12 |
| Pakistan | Dec. 1958 | .18 | 1.52 | 12 |
| Portugal | 1958 | .10 | 1.45 | 7 |
| Spain | 1958 | .18 | 1.51 | 12 |
| United Kingdom | April 1959 | .55 | 1.57 | 35 |
| West Germany | May 1960 | .54 | 1.61 | 34 |

# Alabama Textile Men Hold Annual Convention

## GROUP ELECTS TINGEN, HEARS DONALD COMER STRESS NEED OF MAKING TEXTILE STORY KNOWN

SAMUEL TINGEN, treasurer of West Boylston Mfg. Co., Montgomery, Ala., was named head of the Alabama Textile Manufacturers Association at the group's 1961 convention, April 12-14, Biloxi, Miss. Tingen succeeds Donald Comer Jr., president of Avondale Mills, Birmingham, Ala., who moved to the post of chairman of the board of the association.

W. E. Dunn, vice-president of Huntsville (Ala.) Mfg. Co., was named vice-president of the association succeeding Tingen. Elected treasurer was Robert B. Horsley, president and general manager of Pepperell Mills, Opelika. New directors of the association are: Ray Thomas, manager of Goodyear Tire & Rubber Co., Decatur; Wilson Patterson, agent, Tallassee Mills, Tallassee; Henry Johnson, vice-president, Siluria Mill, Siluria; and Jack Swann, general manager, Wehadkee Yarn Mills, Talladega.

### Good Public Relations—A Must

Donald Comer, retiring president, told members of the association that they must make their story known to the public and to the government. He cited cases where the government had enacted legislation to protect domestic markets and concluded about the textile industry that "either we haven't got our story over to the American people or we have and they don't consider us important enough to care whether we stay in business or not."

He pointed out that some mills are neglecting to do a proper public relations job in their own neighborhood. "Everyone in our organization must work effectively toward building our reputation in our community and if there are booby traps we have created, they must be removed."

"On the national level," he said, "we need the textile industry to acquaint the people with what it is doing, how it contributes to the American economy and way of life, the progressiveness of the industry, the terrific value it is able to offer the consumer with its product, and its necessity in defense."

"Our future as an industry in this country," he concluded, "is going to be based largely on public opinion. We have the means at our disposal to make this opinion favorable and if we don't it's our own fault. I believe that when more people know who we are and what we are doing, our so-called luck will start changing for the better. Then an adjustment will occur, because it is a necessity and because it is right."

Members of the association heard Joe L. Lanier, president of West Point Mfg. Co., call for men with education, vision and imagination in the textile industry. Automation and the many changes that have occurred in the industry call for men with these qualities, he said.

He cited awards of textile scholarships as an outstanding example of how interest and enrollment in textile schools had been maintained. Citing the experience of his own company, he said that West Point started a scholarship program in 1953 which provided for a two-year certificate at Auburn University. "Early in the program," he said, "it became apparent that the students were not going to be satisfied with a two-year certificate. They wanted their degrees."

"We are going to have to consider the source of our future management as being college graduates rather than the more limited "trade school concept," he said.

### Cotton Still King At Sears

Cotton remains King at Sears Roebuck & Co., L. E. Oliver, vice-president of the Southeastern District of Sears, told the association. He said that more and more emphasis is being given to cotton goods, particularly in apparel. Oliver pointed out that less than .02% of Sears' foreign purchases during 1960 were textiles. The company purchased products from 83 corporations and bought from 52 individual greige goods mills, he said.

Oliver pointed out that imports constituted a challenge that must be met. He said Sears carried imported goods of all types, such as Italian handbags and shoes, prior to the fad which swept the nation, and wound up marking them down to sell them. After the Italian influence hit, he said, the store bought domestic copies of the same type products and sold them all.

At the Textile Education Foundation meeting held in connection with the association's meeting, T. Floyd Holmes, Opelika Mfg. Co., Opelika, was named president. He succeeds E. C. Gwaltney, Russell Mfg. Co., Alexander City.

Other officers are: R. B. Horsley, Pepperell Mfg. Co., Opelika, vice-president; Dwight Wilhelm, executive vice-president of the Alabama Textile Manufacturers Association, secretary; and J. W. Patterson, Tallassee Mills, Tallassee, treasurer.

George R. Hooper, Samson Cordage Works, Anniston, Ala., and A. T. Hanson, West Point Mfg. Co., West Point, were named trustees of the foundation.

Cleveland Adams, head of the Textile School of Auburn University, reported to the foundation on its project to determine the effect of over-drying and excessive cleaning of cotton at the gin. The study shows that the extent of damage to the fiber is proportional to the severity of the ginning, Adams said.

He pointed out that while overdrying and excessive cleaning raises the grade of the cotton from one-half to one full grade, considerable damage to running performance and yarn quality. Staple length is reduced from $\frac{1}{32}$ to $\frac{1}{16}$-inch. "The short fiber content increases considerably as does length variability," he reported. This results in reduced yarn strength, lower spinning limit, greater unevenness, poorer yarn appearance and more ends down during spinning.

Ends down, on tests where cotton was dried to 3% moisture and three cleaners were used, were more than five times as many as with normal drying and one cleaner. Cotton dried to low moisture content is more brittle, and when excessively cleaned under this condition, is more seriously damaged than cotton excessively cleaned with normal moisture, the tests showed.

Fortunately, it is difficult to overdry cotton with most ginning equipment, unless the moisture conetnt of the seed cotton is low, Adams concluded.

# Do You Have What It Takes To Be A Supervisor?

## CHECK YOURSELF AGAINST THESE QUALITIES AND FAULTS

### PART 2

By WILMER WESTBROOK

WHAT are the things that make for a successful supervisor? What does management look for in choosing a man for a supervisory post? First, let's look at a case history.

The South Overshoe Mill built an addition to its weave room and added a supervisor on each of its three work shifts. The mill had been planning the extension for some time and had three men ready for the supervisory jobs as well as the necessary operators, fixers and auxiliary workers.

The men chosen as the new supervisors were Bob Brown, John Hankens and Don Miles. Each of these men had been with the company for a number of years, had good records, and were considered capable of performing their new duties.

Management had prepared these men by assigning them as assistants to regular supervisors for several months and had also let each of them head a job temporarily while the other supervisors took time off for the annual vacations.

The new unit, designated Weave Room No. 3, was put into production with a minimum of confusion. Management was congratulating itself on the new unit's performance as the production and quality approached that of the other units.

And then things began to go wrong in No. 3. It took some time and quite a bit of investigating to find what was wrong.

It was found that Bob Brown, the first shift supervisor, had let his promotion go to his head. His promotion to supervisor had convinced him that he was smarter than his fellow workers and he became conceited and arrogant. Bob became argumentative, even with his superiors, refused to co-operate with the other supervisors, and persisted in "talking down" to his subordinates.

On the other hand, John Hankins, the second shift supervisor, tried to get along with everyone. He "passed the buck" on disagreeable tasks and sidestepped taking a firm stand on many matters. Anything requiring a decision was referred by him to the overseer.

When management decided that these two supervisors would not make the grade they were demoted to their former positions and two other men were placed on the supervisory jobs.

Of the three, only Don Miles made the grade as a supervisor. Why? Don made mistakes, but he admitted and corrected them; he had much to learn, so he asked for advice; when action was needed, he made a decision and then proceeded without fear or favor. He was fair to his subordinates and honest with his superiors. Don Miles developed into a first-class supervisor and is headed toward a management post.

What makes for a good supervisor? What is management looking for in a man when it considers him for promotion to a supervisory spot? Here are some of the things that will be kept in mind.

**The planning and laying out of jobs is one of the many duties of a supervisor.**

(1) A good work record—If he has not been a good worker in every respect he will not be successful in directing the work of others.

(2) A good personality—He must be able to impress and get along with others, being neither over-friendly or distant with his employees.

(3) Knowledge of all phases of the work—A supervisor who is not familiar with the various jobs is handicapped in allotting work, making decisions, and he cannot "talk the language" of the workers.

(4) A good reputation—A supervisor's off-the-job contacts have much to do with his success. He should be able to command the liking and respect of the people he deals with, both socially and professionally.

(5) He should be ambitious and have a genuine liking for the job—A man who is interested in only the increased pay and prestige of a supervisory job, or one who regards it as only a stepping stone to something bigger, cannot put the sincerity and personal drive into his work that is so vital in leading and inspiring others.

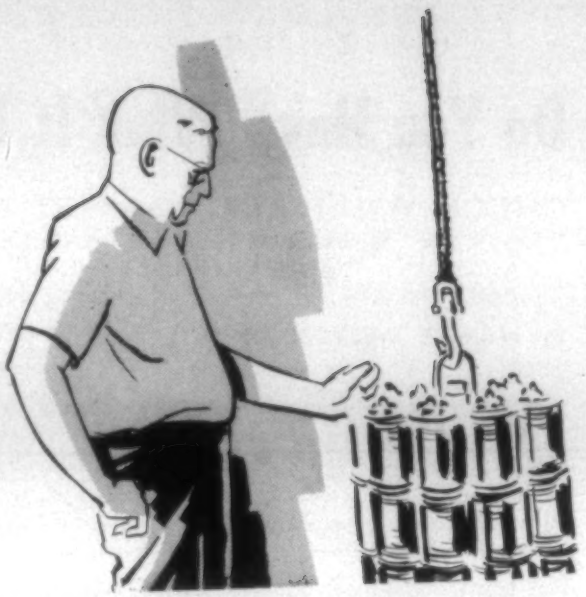
There are also some faults and shortcomings that management will look for in prospective supervisors. No man is perfect and many of these weaknesses can be overcome or minimized. The company will be wary of the man who:

(1) has family troubles, or cannot get along with relatives and neighbors;

(2) drinks or gambles to excess;

(3) has financial troubles or has a bad credit rating;

(4) is argumentative, uncompromising, opinionated, con-



**The supervisor must be familiar with all the operations and processes on his job.**

ceited, or has other traits of character that will prevent him from obtaining the co-operation of others.

The supervisor is a key man in the organization and a wrong selection can be costly. If he fails to make the grade, the company has lost not only the time and money required to train him and the material losses to the department, but also the intangible loss in employee morale and a lowering of supervisory prestige.

The man who avoids these shortcomings and who develops those qualities previously mentioned will be considered for promotion when a supervisory post is open.

However, it is only after a man actually gets the promotion that he can finally pass the test and show that he is management potential. While sometimes a prospective supervisor is given a trial period on the job before being permanently assigned, this is not the same as actually running the job. A man acting in a supervisory post only temporarily can postpone changes, he can refer any difficult problems to his superiors. A regular supervisor cannot. He must make decisions every day—and the welfare of his department depends on the wisdom of those decisions.

A man's final test comes when he is put on the job on his own. Then it becomes a matter of his own talents, intelligence, training and application to the job.

# Natural And Synthetic Fiber Dyeing, Processing Discussed At Fiber Society's Spring Meeting

## ADVANTAGES OF POLYPROPYLENE YARNS AND DETAILS OF A NEW WOOL SHRINK PROCESS ARE AMONG THE DISCUSSIONS

DATA on the dyeing and processing of natural and synthetic fibers took the spotlight at the Spring meeting of the Fiber Society, April 27-28, at the University of Georgia, Athens. Technical sessions were held morning and afternoon of both days.

### Polypropylene Fibers

Dr. Max Levine of Hercules Powder Co., Wilmington, Del., told the group that the development of polypropylene fibers opens a new family of fibers with excellent physical properties and holds promise of potential in industrial fabrics and blends with cotton and rayon.

"Polypropylene fibers have high strength, low moisture retention, good resiliency and excellent abrasion properties," Dr. Levine reported, "and within six months time, these fibers will be available for commercial use at a total of around 10 million annual pounds."

Considerable progress was reported by Dr. Levine in the dyeing of polypropylene. "The task is difficult," he said, "since the polymer is completely hydrocarbon and thus contains no 'handles' which can hold dyestuff. The vats, the vat esters, the sulfurs, the azoics and the disperse have affinity for polypropylene."

The ironing of fabrics with polypropylene is another problem, Dr. Levine said. "We have found," he said, "that a medium weight polypropylene fabric could be ironed at the synthetic setting (250-280° F.). This is a borderline situation and we are not prepared to recommend this for common use."

He pointed out that the fiber has wash-and-wear characteristics and that it should be possible to produce a fabric that will not require ironing. Blends up to 65% polyproylene with non-thermoplastic fibers can be ironed at synthetic settings of the iron.

In spite of these questionable properties of the fiber there are positive reasons why it will very likely join nylon, polyesters and acrylics as an important synthetic fiber.

The positive factors are its high abrasion resistance, low shrinkage in boiling water and possibly low cost. Polypropylene in blends with cotton and rayon for apparel fabrics appears to be an excellent fortifying fiber. Increases in tear and burst strength are shown as the polypropylene content is increased in blends with rayon.

Staple fiber and spun yarns have shrinkages of under 3% and continuous filament yarns generally less than 2%. In the price area the cost of the monomer is quite low; this has led to the widely held opinion that the fiber will be quite low priced. It is to be hoped, Dr. Levine said, that a low cost fiber will be realized but it is difficult to project.

### Wool Shrink Process

The resin treatment of wool fabrics to make them durably shrink-resistant is on the road to being a successful chemical research venture, according to Dr. Harold P. Lundgren, Western Regional Research Laboratory, U.S.D.A., Albany, Calif.

The new technique for making wool fabrics shrink resistant, he reported, is through the formation by interfacial polymerization of a thin polyamide film on the fabric surface. Referred to as IFP, this process is basically a resin additive finish as opposed to the more commonly used commercial shrink resist process based upon chemical attack of the fiber surface.

While the new process is used primarily to control felting shrinkage, Dr. Lundgren pointed out, it also reduces mussiness, thus reducing the amount of ironing required, and otherwise contributing toward easy-care properties of the fiber.

"The new treatment has proved successful for shrink-proofing wool suitings, knitted wear, blankets and other wools," Dr. Lundgren reported. "Treated garments endure repeated machine washings, dry cleaning and wearing with superior retention of dimensions, softness and resilience."

The treatment can be applied to dyed goods, provided the dyes are fast under alkaline laundering conditions. The treatment tends to lighten the dye slightly with the darker shades.

The interfacial polyamide treatment is applied passing the fabric through two dip-pad operations in succession, followed by washing of the fabric to remove unreacted chemicals and soften the fabric, Lundgren pointed out.

"Among the attractive features of the new treatment," Lundgren said, "are its very great versatility and adaptability to the shrink-proofing of a wider range of woolens and worsted fabrics, both woven and knitted. The high degree of shrinkage control attainable with very low resin uptake is outstanding for a resin type treatment."

### Warp Streak Prevention

The floating dent reed in which the dent wires are suspended at both ends by unsoldered helical springs instead of being anchored in place with solder, was suggested as the most practical means of minimizing warp streaks by John E. Pretka of the Du Pont Co.

"Maximum uniformity of appearance of fabrics both in warp and the filling directions is essential for satisfactory asthetics of fabrics woven for volume end uses," he pointed out.

Pretka said that his work indicates that the loom reed is the major cause of loom-induced warp streaks in woven fabrics.

Two mechanisms have been defined as controlling the tendency of reeds to impart warp streaks, he said. These are the spacing of the dent wires and the vibrational characteristics of the dent wires. The floating dent reed, Pretka con-

tinued, offers advantages of reduction of reed marks, reduced cost of fabrication and repair of reeds, increased ease of repair and reduced abrasion of warp yarns.

Work is currently under way, he said, to determine the practicality of and life of the floating dent reed as used under commercial weaving conditions, it was stated.

### Friction Studies

Friction studies on Caprolan filament yarns were discussed in a co-operative presentation by Dr. Carl Schlatter, consultant, Wilmington, Del., and Harry J. Demas, fiber development, National Aniline Division, Allied Chemical Corp. This work will find application for the improving of the products manufactured in these fields.

The information presented covered two fields: the effect of finish formulation, amount of finish and, indirectly, finish distribution on the lubricity or its reciprocal term, the friction of yarns and fibers.

Tomlinson Fort Jr. and J. S. Olsen of the Du Pont Co. discussed a method and apparatus for determining the friction of textile fibers at very low speeds within lubricant film, conditions which have been found important in processing textile fibers. The textile processing industry should expect improvement in processing in the future by a better choice of lubricants, they reported.

### Vat Dyeing

Dr. J. Wegmann of Toms River Chemical Corp., Toms River, N. J., discussed "Shade Change of Vat Dyeings on Soaping in Relation to Dyeing Process and Substrate." Great efforts have been made, he pointed out, from different angles to relate chemical constitution and properties of a substance in connection with dyes and their color fastness properties. Since the relation not only depends on the constitution, but also the environment in which a dyestuff is incorporated, the importance of the substrate will have to be considered in future work."

"The molecular theory of the shade changes occurring with vat dyes—now fully established and proved—will provide the platform to study these relationships in the case of water insoluble dyes," Dr. Wegmann said. It can also be expected to provide valuable knowledge on the structure of the inner surface of textile fibers. Any basic knowledge must sooner or later lead to the realization of technically useful results.

"This can be expected to be true, also, in the present case. Since the dye fiber interactions obey the same laws principally as the biologically important interactions in connective tissues, for instance, it may be that from exchange research and textile application research, mutual profit will result, which certainly would be of greater importance than just understanding what happens in a dyeing process," Wegmann concluded.

Other presentations made at the Fiber Society meeting include a paper by H. E. Millson and Charles Maresh of American Cyanamid Co. relating to the dyeing of a wool and a paper by R. H. Brand of The Du Pont Co. describing natural fiber crimp and its successful duplication in Orlon acrylic fiber.

The Fall meeting for the society has been set for October 12-13 in West Point, N. Y. Other scheduled meetings include: April 12-14, 1962, in Raleigh, N. C.; October 4-5, 1962, in Boston, Mass.; May 9-10, 1963, in Charlottesville, Va.; and October 3-4, 1963, in Absecon, N. J.

# Georgia Textile Manufacturers Receive Warning Against The Industry's Tendency To Overproduce

## RETIRING PRESIDENT McKENNEY TELLS MEMBERS THAT NEXT TO IMPORTS, THIS IS THEIR GREATEST DANGER

NEXT to the crippling effects of foreign imports, the tendency of the industry to overproduce and to sell at ruinous prices is the major cause of the textile industry's poor economic health, members of the Georgia Textile Manufacturers Association were told by retiring president, Paul K. McKenney.

Speaking at the association's annual meeting April 26-29 in Hollywood Beach, Fla., McKenney said that textile production increased 47% in the nation from 1959 through 1960, while prices—using the U. S. Department of Labor's wholesale price index base—dropped to only 91% of the 1947-49 level.

McKenney attributed the low prices to the full operation of mills, even during periods when supply was exceeding demand. He also noted that in 1960, for the first time, imports of manufactured cotton products reached a raw cotton equivalent of 496,000 bales.

### Election Of Officers

In the election of officers John P. Baum, vice-president of the woolen and worsted division of J. P. Stevens & Co., Milledgeville, Ga., was named president of the association for the coming year. Named vice-president was G. H. Smith, general manager of the Lindale, Ga., division of Pepperell Mfg. Co. Other officers are: Frank L. Carter, re-elected secretary; and Robert Train, president of Gibb Mfg. Co., Macon, Ga., treasurer. J. Frank Caylor, manager of Celanese Fibers Co., Rome, Ga., was elected to the board for one year to fill a vacancy on the board. James A. Byars, manager of the Eagle & Phenix Division of Reeves Bros., Columbus, Ga., was elected to the board for a three-year term.

Baum

Other directors elected were J. L. Glass Jr., Puritan Cordage Mills, Athens; Harold B. Wetherbee, Flint River Cotton Mills, Albany; W. H. Hightower, Thomaston Mills, Thomaston; Joe L. Jennnings, West Point Mfg. Co., West Point; and A. J. Morse, Coats & Clark Inc.

### Group Discussions

Three simultaneous group discussions on key industry topics were held as part of the annual meeting. Topics for the group discussions were: "Insuring Success Through Improved Manufacturing Techniques"; "Putting the Spotlight on Merchandising"; and "Success Through Prerogatives of Management."

George H. Hightower, Thomaston Mills Co., Thomaston, in reporting on the manufacturing discussion stressed that the new and highly productive machines require careful analysis and study of machine layout to minimize machine intereference with operators and to improve mobility.

Mill management needs to recognize that proper statistical control of such items as waste, per cent seconds, supply costs, overrun of specialty patterns and fabrics and yarn weight is essential, he said, and more money can be saved in some instances than can be made in others. Serving as co-moderator of the manufacturing discussion was Hansford Sams Jr., Scottdale Mills, Scottdale.

### Industry Statistics

The merchandising discussion was led by Herman D. Ruhm Jr., Wellington Sears Co., New York City, and R. H. Jewell, Crystal Springs Bleachery, Chicamauga.

Mr. Ruhm stressed the importance of the accumulation of statistics from related market groups and their prompt circulation in order to enable individual members to make intelligent merchandising decision. He urged that great pains be taken within classifications of the groups to give sufficient details regarding stock, unfilled orders and production. In a relatively short time, he said, individual members will be able to see what is taking place and relate this information to their own needs.

Ruhm cited the area of imports as being one where more detailed information was needed. He said he knew of no periodic summary of imports by group classification and country of origin.

"We are good technicians," he said, "in all phases of our business. Our plant facilities are generally good. Yet we have seen our know-how and our material assets abused and wasted by poor judgment."

A nation's economic wealth lies in its ability to produce, stressed Morris Bryan Jr. of Jefferson Mills in his report on the management group discussion.

"The economic world in which we live is completely different from any which previously confronted our nation," he pointed out. "Many nations challenge our productive forces in competition for the world markets as they have never before been challenged."

There are three areas through which cost reduction can take place, he said. They are:

(1) Setting standards of perfection in the ranks of management throughout textile plants.

(2) Allying with all levels of education with particular emphasis on economic education and a concentrated effort that all may understand where true wealth is derived.

(3) Motivating all its people by giving more research study and action to the principle that well-educated and well-informed people will respond to the enhancement of national wealth-producing potential.

Co-moderator of the management discussion was J. M. Cheatham, Dundee Mills, Griffin.

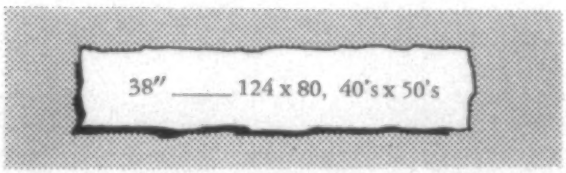
# Considerations In Calculating Fabric Weight

## WEIGHT IS AN IMPORTANT FACTOR TO THE FABRIC BUYER

By E. B. BERRY

THE weight of a yard of cloth is an important item in the buying and selling of fabrics. This may be expressed as ounces per square yard, ounces per running yard, pounds per yard, pounds per square yard or yards per pound. The latter is used almost exclusively in cotton dress goods. Any fabric weight is dependent upon many variable items such as ends per inch, picks per inch, yarn numbers in the warp and filling, per cent crimp in warp and filling, per cent size on the warp, and fabric width.

This article deals with weight calculations for the striped chambray fabric reviewed in the last two issues.




The above figures describe, in part, a chambray fabric. These items are so established in the trade that, when the price of a fabric and description of it is quoted in the commercial journals, there is no mention made as to what these figures represent.

The width of the fabric is 38", and includes both selvages. The blank represents the number of yards of fabric per pound. This figure will be calculated. 124 is the sley or ends per inch in the cloth, while 80 is the picks per inch in the cloth. 40s represent the yarn number of the warp. This is cotton yarn and is single ply, 50s is the yarn number of the filling. It too is cotton and is single ply.

These are some of the essential details of the fabric, but are not enough to accurately calculate the weight. The mill has determined the warp contraction is 7%, and the warp will have 10% size added to it. Also the selvage is ¼" on each side, with the ends per inch doubled in the selvage.

How many ends are in the warp? It is best to determine the exact number of dents for the selvages and dent for the body. Using four ends per dent you get $\frac{124}{4} = 31$ dents per inch. This is a practical reed for this chambray. Being plain weave it is desirable to have either 2 or 4 ends per dent. With two ends you get $\frac{124}{2} = 62$ dents per inch, which is too fine.

The selvages on this fabric are to be ¼" on each side; therefore, 31 × ¼" = 7.75 dents on each side. This is rounded off to 8 each side or total 16. The total number of dents needed for this facric are $\frac{124}{4} \times 38" = 1{,}178$. Subtracting the selvage dents from the total dents will give the body dents:

1,178 dents total
— 16 dents selvage
1,162 dents for body

The body is reeded 4 ends per dent and the selvage is reeded double the body or 8 ends per dent. With these figures it is possible to calculate the exact number of ends in the warp.

1,162 dents × 4 ends/dent = 4,648 ends body
16 dents × 8 ends/dent = 128 ends selvage
4,776 ends total

If a yard of warp yarn would make a yard of cloth there would be 4,776 yards of warp yarn in this fabric. However, the warp yarn bends around the pick in weaving, and extra length of warp yarn must be added for this. From the specification, the warp contraction is 7%. Just how is this contraction used?

Warp contraction uses as its base (100%) the length of the straightened yarn before bending takes place. For this chambray, the warp contraction is 7%. This means that 7% of the original length of yarn that was needed to make a yard of fabric is used up because of the bending. It follows then that 93% is left, and this is one yard of fabric. If one yard of fabric is 93% of the original length, what was the original length?

$$\frac{1.00}{(100 - 7\%) = .93} = 1.07527 \text{ yards}$$

This figure is known as delivery, and means that it takes 1.07527 yards of warp yarn to make one yard of cloth. If the figure 1 is dropped and the decimal point moved over two places for percentage, the figure is 7.527% crimp. This 7% contraction, which, when subtracted from 100, becomes a divisor, is the same as 7.527% crimp, which, when added to 1 becomes a multiplier. Either figure, when used properly, will give the same result. As seen in the chambray fabric, the yards of warp yarn needed to make one yard of fabric are as follows:

*Contraction*:

$$\frac{4{,}776}{(100 - .07) = .93} = 5{,}135.5 \text{ yards}$$

*Crimp*:

$$4{,}776 \times 1.07527 = 5{,}135.5 \text{ yards}$$

Most cotton dress goods are sold in the greige state (off loom) with the warp sizing still in them, and the weight of the size is included in the weight of the goods. The fabric buyer recognizes the fact that most single ply cotton warp yarns must be sized in order that they may be made strong enough to weave. However, size is cheaper than cotton, and some unscrupulous fabric manufacturer may try to put more size on the warp than is necessary to weave. It is important,

*the weaver's friend . . .*

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therefore, that the percentage of size in the fabric be agreed upon between both buyer and seller. This is generally expressed as a percentage of the total fabric and not on the weight of the warp. This will be discussed later.

From the specification, the mill will add 10% size to the warp, based on the raw or unsized yarn. The figure 5,135.5 will be increased by 10% or 5,135.5 × 1.10 = 5,649.05 equivalent yards. Yards are length and size is weight, but is it possible to multiply the two together?

This means that the length is increased by 10%, not because there is really more warp in the fabric, but by figuring 10% more yardage, the weight of the warp is increased by 10%, which is the weight of the size.

The warp yarn number is 40/1 cotton. With the equivalent yardage of the warp yarn calculated, it is easy to determine the poundage in the warp direction.

$$\frac{5{,}649.05 \text{ yards}}{\frac{840 \times 40 \text{ yards}}{\text{pounds}}} = .16813 \text{ pounds}$$

The weight of the filling is next. The width of the fabric is 38″. Since the filling is bent around the warp yarn in weaving, each pick must be more than 38″ long. From the specification, the filling contraction is 5%. Just how is this contraction used?

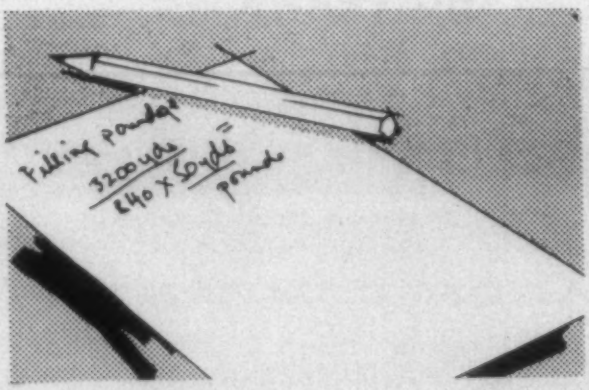
Filling contraction uses as its base (100%) the length of straightened yarn before bending takes place, which is the width in the reed. For this chambray, the filling contraction is 5%. This means that 5% of the reed width is lost, or used up, due to the filling bending. It follows, then, that 95% is left, which is the width of the fabric from the loom. If 38″ is 95% of the original reed width, what was the reed width?

$$\frac{38}{(100 - 5\%) = .95} = 40\text{″ reed width}$$

A quick check will prove the accuracy of the 40″. This is the 100%, and 5% is lost due to the bending of the filling. It amounts to 40″ × .50 = 2″. This is then subtracted from 40″, leaving a 38″ fabric width.

As in the warp, the filling has a term called crimp, which uses as its base (100%) the width of the fabric. Additional length of each pick must be allowed over and above the fabric width, to compensate for the bending of the filling. If the fabric width is the 100%, how much more yarn must be put in the reed, to allow for this bending?

$$\frac{1.000}{(100 - 5\%) = .95} = 1.05263$$




This means that the fabric width of 38″ must be multiplied by 1.05263 to obtain the reed width, and this comes to 38″ × 1.52263 = 39.9999 or 40″ the same as before. Either figure, when used properly, will give the same result.

Reed width is usually expressed in inches and to convert to yards, it is divided by 36. The picks in a yard are the picks per inch × 36. Since a 36 is on the top of the equation, and a 36 is on the bottom, they always cancel out, so the yards of filling on one yard of fabric is the picks per inch × the width in inches in the reed. In this case:

80 × 40 = 3,200 yards

The filling yarn number is 50/1 cotton. With the yardage of the filling calculated, it is very easy to determine the poundage in the filling direction.

$$\frac{3{,}200 \text{ yards}}{\frac{840 \times 50 \text{ yards}}{\text{pound}}} = .07619 \text{ pounds}$$

.16813 pounds in the warp direction
+.07619 pounds of filling

.24432 pounds per yard of fabric

To convert to ounces per yard, merely multiply by 16.

.24432 × 16 = 3.909 or 3.91 ozs. per-yard

The customer is not necessarily interested in the percentage size that is put on the warp yarn to make it weave. This is a mill problem. The customer is interested, however, in the amount of size in the total fabric, for the size weight is lost in finishing.

There are .16813 pounds in the warp direction, which includes cotton as well as size. At the slasher, the warp yarn had 10% size added to it. This means that the .16813 pounds is now 110% of the weight of the unsized yarn. What was the weight of the raw cotton before sizing?

$$\frac{.16813}{110} = .15285 \text{ pounds}$$

This, subtracted from the total weight in the warp direction will give the weight of size on the warp.

.16813 pounds total
.15285 pounds raw cotton

.01528 pounds size

A quick check will prove this. There are .15285 pounds of raw cotton and 10% size has been added, therefore .15285 × 10% = .01528 pounds the same as before.

The percentage of warp yarn, size and filling yarn may now be calculated.

$$\frac{.15285}{.24432} = 62.56\% \text{ warp yarn}$$

$$\frac{.01528}{.24432} = 6.26\% \text{ size}$$

$$\frac{.07619}{.24432} = 31.18\% \text{ filling yarn}$$

100.00%

The customer could specify that there may not be over

6.5% size in the fabric. The mill could meet this by putting 10% size on the warp yarn.

In comparing the weight of one fabric with another, the weight is useless if the width is not known. Even when width is given, it may be hard to think of them on the same width basis. Two fabrics are illustrated for comparison.

(a) 30" 4.25 yard Jean 3.76 ozs.
(b) 52" 3.76 yard Lawn 4.25 ozs.

It would seem perhaps that the lawn is the heavier, but really it is lighter. They must both be brought to the same width, before a true comparison of weight may be made. It seems reasonable that a 36" width would be a good standard because this will make a running yard a square yard. On this width basis these two fabrics become:

(a) 4.52 ozs. per square yard Jean
(b) 2.95 ozs. per square yard Lawn

The fabric under discussion is 3.91 ozs./yd. on a 38" width. If the 3.91 ozs. is divided by 38", it will give the ounces per inch. Then multiply by 36" to bring it to ounces per square yard as follows:

$$\frac{3.91 \times 36}{38} = 3.70 \text{ ozs. per square yard}$$

As already stated, this fabric is sold on a basis of the number of yards in a pound. Pounds per yard and yards per pound are the reciprocal of each other. That is, if either is known, divide it into one, and the answer will be the other. In this case of .24432 pounds per yard it comes to

$$\frac{1}{.24432} = 4.09 \text{ yards per pound}$$

This is the figure that would be placed in the blank space at the heading of this article.

Specifications for fabrics are not always as complete as that reviewed above. It is possible to list the following:

38" 4.09 124 x 80, __'s x __'s

This does not give the yarn numbers, and perhaps 3 different weaving mills could produce essentially the same fabric for the same customer, and each could use a different combination of warp and filling yarn numbers. With such a setup, each mill would use the yarn numbers that they have in production, without changing their spinning frames. This would mean a saving to the manufacturer as well as ease of handling fewer yarn numbers.

It would be a never-ending task of trial and error to pick two yarn numbers that would meet the weight requirements and also meet all the other specifications. A logical approach would be to determine the average yarn number of warp and filling yarns. That is, calculate the yarn number that could be used for both warp and filling. Then deviations can be made from it, depending upon local spinning conditions.

In our mind's eye, we can cut off 4.09 yards of this fabric and place it on a scale or balance. On the other side of the scale, we will place a one-pound weight. These two should balance, for the specification calls for 4.09 yards of cloth in one pound. If we can calculate the number of yards of yarn in the 4.09 yards of fabric, and divide it by 840, this will be

the cotton yarn number, which, if put in warp and filling will meet all the specifications.

It has already been determined that there are 4,776 ends in this fabric. Also, it takes 1.07527 yards of warp yarn to produce one yard of fabric. The warp yarn weight must be increased by 10% to allow for the size that is to be added. So for this it is: $4776 \times 1.07527 \times 1.10 = 5649.04$ yards of yarn (by weight) per yard of cloth. However, there are 4.09 yards on the scale, so: $5649.04 \times 4.09 = 23{,}104.57$ yards of warp yarn (by weight) in 1 pound of fabric.

With 80 picks per inch and a 40" reed width there are $80 \times 40 = 3200$ yards of filling yarn in one yard of fabric. But there are 4.09 yards on the scale so: $3200 \times 4.09 = 13{,}088$ yards of filling yarn in one pound of fabric.

Adding these two together:

23,104.57 yards in the warp direction per pound
13,088.00 yards of filling per pound

36,192.57 yards per pound

If this yardage is then divided by 840, it will give

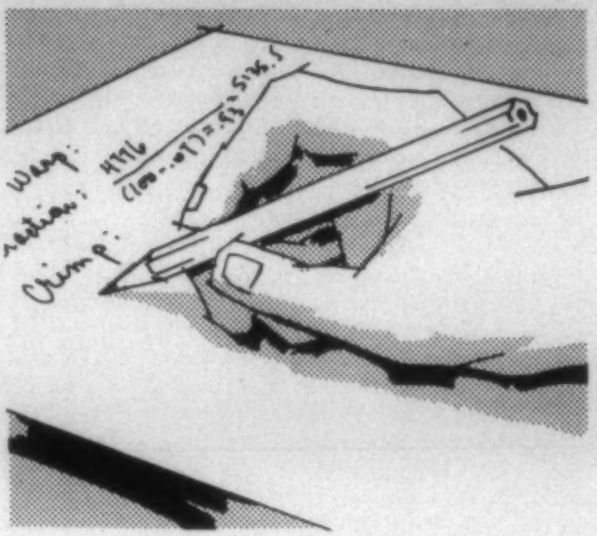
$$\frac{36{,}192.57 \text{ yards}}{840 \text{ standard}} = 43.09/1$$

the cotton yarn number that will meet all the specifications.

### Balancing Warp And Filling Yarn Numbers

Even though 43.09/1 could be used for both warp and filling, it probably never would be woven this way. In heavy to medium weight plain woven goods, the warp and filling yarn numbers may be the same. A coarse sheeting, for example, may use a 15/1 in both warp and filling. As fabrics become finer, there is a spread between warp and filling yarn numbers with the warp being heavier. A print cloth fabric could use 30/1 in the warp and 40/1 in the filling. A combed lawn fabric, which is much finer than the print cloth, could be made with 70/1 warp and 120/1 filling. Just which yarn number is used in the warp and filling will depend upon the





type of fabric being woven and what yarn numbers the spinning mill is running.

The yarn mill, that supplies the weaving mill which is producing this chambray fabric, is making 40/1 warp yarn as a standard number. Therefore, 40/1 will be used. This establishes the weight of the warp.

$$\frac{\text{23,104.57 yards of warp yarn in one pound of fabric}}{\text{840} \times \text{40 yards per pound}} = .68764 \text{ lbs. in the warp direction in one pound of fabric}$$

Since the weight of both warp and filling must add up to one pound, the weight of the warp is subtracted from one, to arrive at the weight of the filling:

1.00000 total
— .68764 lbs. warp

.31236 bs. filling

It has already been calculated how many yards of filling yarn in one pound of fabric. With the weight of filling now determined, this establishes the yarn number.

$$\frac{\text{13,088 yards of filling yarn in one pound of fabric}}{\text{.31236 lbs. of filling} \times \text{840 standard}} = 49.9/1 \text{ or } 50/1$$

cotton yarn number in the filling, that, when used with 40/1 cotton yarn number in the warp, will meet all the specifications.

The average yarn number for warp and filling is 43.09/1, and the warp yarn is made approximately 3 yarn numbers heavier, to 40/1. It is seen that the filling yarn number cannot be made lighter by 3 yarn numbers, or to 46/1. Once the warp yarn number has been established, there is no quick, easy way to guess at the filling yarn number. It must be calculated to arrive at it accurately.

If the spinning mills had been producing a 38/1 warp yarn instead of a 40/1, this same chambray fabric could be woven. In the above calculation, 38/1 would be substituted for 40/1 and the new weight in the warp direction determined. This would be subtracted from one, to get the filling weight. This in turn would give the new filling yarn number to keep the weight, and still meet all the other specifications.

# S.T.A. Members To Hold 53rd Annual Meeting

## MYRTLE BEACH MEETING TO FEATURE ADDRESSES BY R. DAVE HALL, JACKSON E. SPEARS AND J. Q. DU PONT

MORE than 500 members, wives and guests of the Southern Textile Association are expected to attend the group's 53rd annual meeting June 22-24 at the Ocean Forest Hotel in Myrtle Beach, S. C. Registration will begin at 9 a. m. Thursday, June 22, and the meeting will adjourn at noon on Saturday, June 24.

### Guest Speakers

Spears

Hall

du Pont

Business sessions on Friday, June 23, and Saturday, June 24, will feature three nationally prominent spokesmen for the textile industry. The opening sesson on Friday will offer addresses by Jackson E. Spears of Burlington Industries, and R. Dave Hall, president-elect of the American Cotton Manufacturers Institute. Guest speaker for the closing business session on Saturday will be James Q. du Pont of The Du Pont Co., Wilmington, Del.

### Election Of Officers

Officers for the coming year will be elected at the closing business session. If precedent is followed, the association's current president, R. M. McCrary of Hart Cotton Mills, Tarboro, N. C., will be named chairman of the board of governors to succeed J. N. Jenkins of The Kendall Co., Pelzer, S. C. In line to succeed McCrary as president is W. B. Etters of Reeves Brothers Inc., Spartanburg, S. C., the association's current first vice-president. Moving up from second to first vice-president will be Herman Cone Jr., Cone Mills Corp., Greensboro, N. C. A successor to Cone as second vice-president will be named.

Board vacancies to be filled include those of four retiring governors with terms expiring with the convention. Completing terms will be Jesse Boyce of Erwin Mills, Durham, N. C.; Henry W. Suber of J. P. Stevens & Co., Great Falls, S. C.; Rodger Hughes of Reeves Brothers Inc., Spartanburg, S. C.; and J. W. Inscoe of Carolina Mills, Maiden, N. C.

Two additional vacancies to be filled were created by resignations of Louie Burkes, formerly of Calhoun Mills, Calhoun Falls, S. C.; and Thomas E. Lawson, formerly of Pacific Mills, Columbia, S. C.

### Associate Member Officers

The Associate Member Division of the association will also elect officers for 1961-62. Current officers include E. Haines Gregg of A. B. Carter Inc., Gastonia, N. C., chairman of the council; Carl M. Chalmers of Texize Chemicals Inc., Greenville, S. C., chairman of the division; and Frank P. Barrie of Leesona Corp., Charlotte, vice-chairman of the division.

If precedent is followed, Chalmers will be elevated to succeed Gregg; Barrie will succeed Chalmers; and a new vice-chairman will be named to succeed Barrie.

### *Schedule of Events*

**Thursday, June 22, 1961**

9:00 A.M.—Registration
1:00 P. M.—Men's Golf Tournament, The Dunes Club
6:30 P. M.—Social Hour
7:00 P. M.—Buffet Supper
9:00 P. M.—Dancing

**Friday, June 23, 1961**

9:00 A.M.—Registration
10:00 A.M.—Opening Business Session
Guest Speaker:
Jackson E. Spears, Burlington Industries, New York, N. Y.
Guest Speaker:
R. D. Hall, American Cotton Manufacturers Institute, Charlotte, N. C.
1:00 P. M.—Men's Golf Tournament, The Dunes Club
Ladies' Golf Tournament, Pine Lakes Country Club
2:30 P. M.—Bingo Games
6:30 P. M.—Social Hour
7:00 P. M.—Charcoal Steak Supper
9:00 P. M.—Entertainment
10:00 P. M.—Dancing

**Saturday, June 24, 1961**

9:00 A.M.—Registration
10:00 A.M.—Closing Business Session
Guest Speaker:
James Q. du Pont, The Du Pont Co., Wilmington, Del.
12 Noon—Adjournment

# South Carolina S.T.A. Members Devote Spring Meeting To Technical Discussions

## TOPICS FOR GROUP DISCUSSIONS RANGE FROM CARDING THROUGH PLANT MAINTENANCE; MORE THAN 500 ATTEND

MORE than 500 supervisory personnel attended the Spring meeting of the South Carolina Division of the Southern Textile Association at Clinton, S. C., April 14. A highlight of the meeting was the election of E. Lee Ramey, vice-president and general manager of Inman Mills, S. C., as chairman of the division. He succeeds D. H. Roberts of Lydia Cotton Mills, Clinton, S. C.

Named vice-chairman of the division to succeed Ramey was Troy H. Carter, general manager, Woodside Mills, Greenville. Carter is also a member of the association's board of governors, now serving in his second consecutive four-year term.

The following are abstracts of the technical program.

## Picking & Carding

SERVING as moderator for a discussion on picking and carding was W. M. Pittendreigh of Riegel Textile Corp., Ware Shoals, S. C., a past president of the S.T.A. Discussion centered on replies submitted to a questionnaire mailed to S.T.A. members prior to the meeting. The following is an abstract of both questionnaire and answers.

**(1) What is the gross weight of your lap and how many yards/lap do you run?**

*Mill A:* 49 lbs.—56 yds./lap
*Mill B:* 62½ lbs.—65 yds./lap
*Mill C:* 70 lbs.—72.3 yds./lap
*Mill D:* 56¼ lbs.—57 yds./lap
*Mill E:* 57 lbs.—54 yds./lap
*Mill F:* 58 lbs.—57 yds./lap
*Mill G:* 58.2 lbs.—65.6 yds./lap
*Mill H:* 78.75 lbs.—75 yds./lap
*Mill I:* 56.5 lbs.—57 yds./lap
*Mill J:* 47 lbs.—53 yds./lap
*Mill K:* 56¼ lbs.—62 yds./lap
*Mill L:* 52¾ lbs.—54 yds./lap
*Mill M:* 56.55 lbs.—63 yds./lap
*Mill N:* 59.25 lbs.—60 yds./lap
*Mill O:* 61 lbs.—60 yds./lap
*Mill P:* 57 lbs.—56 yds./lap
*Mill Q:* 70 lbs.—(yards not given)
*Mill R:* 50½ lbs.—57 yds./lap
*Mill S:* 57 lbs.—56 yds./lap
*Mill T:* 56 lbs.—52 yds./lap
*Mill U:* 62.2 lbs.—67 yds./lap
*Mill V:* 57 lbs.—65 yds./lap
*Mill W:* 52¼ lbs.—52¼ yds./lap
*Mill X:* 54¼ lbs.—52½ yds./lap

**(2) Do you have print-weight scales? What advantages do they offer? What tolerance do you allow and what is your percent rejects?**

*Mill B:* No print-weight scales. Tolerance allowed is ± ¼ lb. and percent rejects is 1%.

*Mill C:* No print-weight scales. Tolerance is ± ½ lb. Percent rejects is .2%.

*Mill D:* No print-weight scales. Tolerance—± ½ lbs.; percent rejects—.75%.

*Mill F:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—.55%.

*Mill J:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—less than 1%.

*Mill K:* We do have print-weight scales which help us check uniformity. Tolerance is ± ½ lb. and percent rejects is 3%.

*Mill L:* We have print-weight scales. Tolerance is ± ½ lb.—percent rejects is 1%.

*Mill M:* We find our print-weight scales give us a positive check. Tolerance is ± ½ lb. and percent rejects is .33%.

**Roberts, Ramey, Carter**

**E. L. Ramey, vice-president and general manager of Inman Mills, Inman, S. C., has been named chairman of the South Carolina Division of the Southern Textile Association. He succeeds D. H. Roberts of Lydia Cotton Mills, Clinton, S. C. Elected vice-chairman to succeed Ramey was Troy H. Carter, general manager, plain goods division, Woodside Mills, Greenville, S. C.**

*Ashley Roberts, Assistant General Superintendent of the China Grove Cotton Mills, China Grove, N. C., watches as Armstrong representative H. H. Jordan measures diameter of Accotex J-490 Cots in service on these frames. Frames are also equipped with Accotex NO-7876 Aprons.*

# Armstrong Accotex Cots and Aprons can help you keep yarn quality high

*It takes the right combination of complex mechanical elements and human skills to turn out high quality yarn. Among the mechanical factors, the spinning cots and aprons are critically important!*

*Hundreds of mill men standardize on Armstrong Accotex products. These men know that the Accotex line contains a wide range of materials engineered to spin quality yarn on any drafting system . . . with any fiber or blend.*

*They also know that an important part of every transaction with Armstrong is the skilled, helpful service of their Armstrong representative. Armstrong Cork Company, Industrial Division, 6506 Davis Avenue, Lancaster, Pa.*

*S. R. May, Jr., Vice-President and General Superintendent, looks over the Armstrong textile supply catalog with H. H. Jordan.*

*C. C. Morrow, Overseer of the No. 2 card room, examines comber web with Jordan. Accotex NO-728 Covers are on detaching rolls.*

*Gurney Norton, Overseer of the No. 3 card room, learns from Harold Jordan a quick way to check rolls for excessive wear.*

*Jordan chats with roll shop foreman W. A. Russell about the operation of an Armstrong Type "H" cot assembly machine.*

Armstrong

ACCOTEX COTS AND APRONS

*Mill N:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—.45%.

*Mill O:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—1%.

*Mill P:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—1%.

*Mill Q:* Yes, we have print-weight scales. Tolerance—± ½ lb.

*Mill R:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—2%.

*Mill S:* No print-weight scales.

*Mill T:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—.02%.

*Mill U:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—3%.

*Mill V:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—2.1%.

*Mill W:* No print-weight scales. Tolerance—± ½ lb.; percent rejects—1%.

*Mill X:* No print-weight scales.

**(3) Are you using high compression calender rolls? If so what is the increase in lap weight? How do you convey the lap?**

*Mill C:* We use high compression rolls and have an increase in lap weight of 16¾ lbs. The diameter of our lap is 19". We use a lap conveyor.

*Mill D:* We use high compression rolls but have not increased lap weight. Diameter is 17" and we use a lap conveyor.

*Mill H:* With high compression rolls our lap weight has increased 50%. Diameter is 18" and we use a lap conveyor.

*Mill I:* Our high compression rolls have given a lap increase of 5 lbs. Lap diameter is 18" and we use a truck to convey laps.

*Mill J:* We have not increased lap weight with the use of high compression rolls. Our laps are 17" in diameter and are conveyed in trucks.

*Mill K:* Lap weight has increased 9% with the use of high compression calender rolls. Laps are 16" in diameter and are transported by a conveyor.

*Mill O:* We use high compression rolls and have an increased lap weight of 10%. Lap diameter is 18" and laps are conveyed by truck.

**(4) Have you humidity in opening and picking? Do you check moisture in lap?**

*Mill B:* We run 55% in opening and 50% in picking. We check moisture in lap and correct for change.

*Mill C:* We run 45% in opening and 50% in picking. The Moisture Monitor is used to check the lap and we do correct for change.

*Mill D:* Humidity is controlled in opening and picking. Moisture Monitor is used to check moisture in the lap and we correct for change.

*Mill E:* We control humidity in opening and picking but do not check moisture in lap.

*Mill F:* Humidity is controlled in opening and picking but we do not check moisture in the lap.

*Mill H:* We have humidity in picking but not in opening. We do check moisture in the lap and correct for change.

*Mill J:* We use humidity in opening and picking. Laps are checked for moisture and we correct for change.

*Mill K:* We run 52% in opening and picking. Moisture in the lap is checked with the Moisture Monitor.

*Mill O:* We check moisture in the lap and correct for change.

*Mill P:* We use humidity in picking. Moisture in the lap is checked and we correct for change.

*Mill U:* We have humidity in opening and picking. Laps are not checked for moisture.

*Mill V:* No humidity control in opening and picking but do check laps for moisture and correct for change.

**(1) What is your experience with metallic card clothing?**

**(a) How does it affect nep count?**

All mills reported a decrease in nep count with metallic card clothing. One mill reported a reduction of 50%; one 30%; a third 25%. Others replying did not specify percentage reduction.

**(b) Does it increase production?**

Two mills reported no increase in production. All others did increase production. Only one mill cited a specific percentage increase, of 3%. Another cited an increase from 7½ to 10 lbs./hr. with metallic.

**(c) What effect does it have on fly?**

*Mill A:* None
*Mill C:* Increased
*Mill E:* Increased
*Mill F:* Increase
*Mill G:* None
*Mill H:* Increase
*Mill I:* Slight increase
*Mill L:* Increase
*Mill P:* No effect
*Mill Q:* Increase
*Mill T:* 20% decrease
*Mill U:* Increase
*Mill V:* No effect

**(d) What grade and staple cotton are you using and what is your average lbs./hr. carding?**

*Mill A:* SLM; 15 lb./hr.
*Mill C:* M-SM; $1\frac{3}{32}$ to $1\frac{1}{8}$"; 7½ and 10 lb./hr.
*Mill E:* 8 lb./hr.
*Mill F:* 9 lb./hr.
*Mill G:* SLM bright; $1\frac{1}{16}$"; 9.66 lb./hr.
*Mill H:* 9.8 lb./hr.
*Mill I:* $1\frac{1}{16}$"; 9 lb./hr.
*Mill J:* SM; $1\frac{5}{32}$"; 5.5 lb./hr.
*Mill L:* M; 1"; 9.5 lb./hr.
*Mill M:* M; $1\frac{1}{16}$"; 8.5 lb./hr.
*Mill N:* LM, BLM, M; $1\frac{1}{32}$", $1\frac{1}{16}$"; 10 to 13 lb./hr.
*Mill P:* M, BSLM, BLM; $1\frac{1}{16}$"; 8.75 lb./hr.
*Mill T:* $1\frac{5}{32}$"; 7½ lb./hr.
*Mill U:* SLM, LMB; 1", $1\frac{1}{32}$", $1\frac{1}{16}$"; 8.5, 12.5 and 13.5 lb./hr.
*Mill V:* SLM, M; $1\frac{3}{32}$", $1\frac{1}{16}$"; 7.4 lb./hr.
*Mill X:* $1\frac{3}{32}$", $1\frac{5}{32}$"; 8.5 lb./hr.

**(2) What is your experience with split flats?**

*Mill E:* More toppings.
*Mill F:* Better job with metallic clothing.

*Mill G:* Lower nep count with metallic clothing.
*Mill H:* No material difference.
*Mill K:* Experimental—10% fewer neps.
*Mill L:* No improvement.
*Mill M:* Less long staple removed.
*Mill N:* Good on fillet clothing. Not good on metallic.
*Mill O:* Fewer neps.
*Mill P:* Strip reduced. Harder to set. Nep count better.
*Mill R:* Poor card web.
*Mill U:* Satisfactory on metallic.
*Mill W:* Testing—do not grind as often.
*Mill X:* Improved quality on metallic—not on fillet.

**(3) Give size of card coiler, pounds in cans; size of drawing coiler, pounds in cans; and method of transportation.**

*Mill A:* 18" card coiler, 39 lbs. in cans; 15" drawing coiler, 24 lbs. in cans; transported by hand.
*Mill B:* 15" card coiler, 42 lbs. in cans; 14" drawing coiler, 21 lbs. in cans; transported by truck.
*Mill C:* 18" card coiler, 39.6 lbs. in cans; 15" drawing coiler, 28.7 lbs. in cans; transported by hand.
*Mill D:* 18" card coiler, 37 lbs. in cans; 16" drawing coiler, 35.25 lbs. in cans; transported by truck.
*Mill E:* 12" card coiler, 10.7 lbs. in cans; 12" drawing coiler, 17.2 lbs. in cans; transported by hand.
*Mill F:* 12" card coiler, 11.8 lbs. in cans; 12" drawing coiler, 17.2 lbs. in cans; transported by hand.
*Mill G:* 18" card coiler, 40 lbs. in cans; 16" drawing coiler, 32 lbs. in cans; transported by truck.
*Mill H:* 18" card coiler, 31 lbs. in cans; 16" drawing coiler, 36 lbs. in cans; transported by hand.
*Mill I:* 18" card coiler, 36 lbs. in cans; 16" drawing coiler, 36 lbs. in cans; transported by hand.
*Mill J:* 12" card coiler, 10.7 lbs. in cans; 12" drawing coiler, 13 lbs. in cans; transported by truck.
*Mill K:* 18" card coiler, 36 lbs. in cans; 18" drawing coiler, 42 lbs. in cans; transported by truck.
*Mill L:* 18" card coiler, 40 lbs. in cans; 15" drawing coiler, 28 lbs. in cans; transported by truck.
*Mill M:* 18" card coiler, 34 lbs. in cans; 18" drawing coiler, 42.25 lbs. in cans; transported by truck.
*Mill N:* 12" card coiler, 13 lbs. in cans; 12" drawing coiler, 16 lbs. in cans; transported by truck.
*Mill O:* 12" card coiler, 12¾ lbs. in cans; 12" drawing coiler, 15 lbs. in cans; transported by hand.
*Mill P:* 12" card coiler, 11½ lbs. in cans; 12" drawing coiler, 15 lbs. in cans; transported by hand.
*Mill Q:* 15" card coiler, 22 lbs. in cans; 15" drawing coiler, 26 lbs. in cans; transported by hand.
*Mill R:* 15" card coiler, 20 lbs. in cans; 15" drawing coiler, 23 lbs. in cans; transported by truck.
*Mill S:* 12" card coiler, 12 lbs. in cans; 14" drawing coiler, 20 lbs. in cans; transported by hand.
*Mill T:* 12" card coiler, 12 lbs. in cans; 12" drawing coiler, 12.75 lbs. in cans; transported by hand.
*Mill U:* 18" card coiler, 38 lbs. in cans; 16" drawing coiler, 36 lbs. in cans; transported by hand.
*Mill V:* 18" card coiler, 32 lbs. in cans; 16" drawing coiler, 36 lbs. in cans; transported by hand.
*Mill W:* 12" card coiler, 11 lbs. in cans; 12" drawing coiler, 18 lbs. in cans; transported by hand.
*Mill X:* 16" card coiler, 21 lbs. in cans; 15" drawing coiler, 23 lbs. in cans; transported by hand.

# S.T.A. Report——

## Slashing & Weaving

TOPICS included in a group discussion on slashing and weaving were also taken from a questionnaire compiled by the moderator of the session, R. A. Liner of Greenwood Mills, Greenwood, S. C. Highlights of that questionnaire follow.

### Slashing

**(1) When operating multi-cylinder slasher with high pressure steam, do you use the same amount of steam pressure on all cylinders? If not, how do you distribute steam in your cylinders? Why?**

Mill No. 1—
2—Yes.
3—No. From 160-230 degrees.
4—Heat reduced 10% in back two cans, center cans being the hottest, with front cans cooler.
5—
6—No, three times as much in back 3 cylinders—to give 65% drying in back cylinders.
7—Taylor Temperature Control. 6 back cans 260 degrees F. 3 front cans 250 degrees F.
8—We do not use same pressure on all nine cans. We use controls for each 3 can section. The reason is for controlling more easily the amount of moisture left in yarn.
9—Same pressure used in all cans. West Point high speed slashing 9 cans.
10—We have 10 cylinder slashers. We keep the first six cylinders the same, 40 lbs. pressure. Four cylinders are varied to control speed, according to yarn numbers and ends per set.
11—Run the highest temperature in the middle section of cans, with the front section of cans (next to delivery) having the lowest of the three sections.

### Size

**(1) From your experience, what is the best way to check the viscosity of size?**

1—No experience.
2—Use of Zahn cup.
3—With Viscosimeters.
4—
5—Cup with small opening.
6—Cup and stop watch; Viscosimeter on storage kettle.
7—Zahn Viscosimeter.
8—
9—With orifice tube and stop watch.
10—By use of a cup.
11—

**(a) How often do you check viscosity?**

1—No experience.
2—Continually on Norcross sizeometer, calibrated periodically.
3—By shifts.
4—Weekly.
5—No regular schedule—occasionally.
6—Twice/shift.
7—Once week.
8—
9—Checked once a day.
10—Check viscosity twice a week in finished size box and the storage kettle.
11—

**(b) How much variation do you get and what do you consider a reasonable range?**

1—No experience.
2—
3—?
4—5%
5—10 points.
6—1—or—one second in size box. 10 points on Viscosimeter.
7—21.5 (+) or (—) 1 second. 20.5-22.5.
8—
9—Starch mixture runs around 21-23 seconds. Pearl runs about 24 seconds.
10—Figures 27 seconds out of the cup as standard with a tolerance of 2 seconds each way.
11—

### Weaving

**(1) What has been your experience with link-type parallels? Give number in operation and length time in operation.**

Mill No. 1—No experience
2—Approximately 70 X-2 Drapers equipped with link-type; approximately 3 years.
3—146 looms for 18 months, operation good.
4—Only 5 running—look O.K. but cannot claim improvement yet.
5—3 X-P-2 running on link-type, 6 months
6—4 looms running since December, 1960
7—No experience.
8—Not enough in use to give answer.
9—No experience.
10—Have found the link-type parallel very superior if side link is used. Have 260 looms running about three years.

**(a) Cloth Quality**

1—No experience.
2—About same as conventional.
3—Good.
4—No experience.
5—Slightly better.
6—Good.
7—None.
8—Not enough experience to give answer.
9—No experience.
10—Improved.
11—None.

**(b) Loom Efficiency**

1—None
2—About same as conventional.
3—Good.
4—
5—No change
6—95%
7—None.
8—
9—
10—Increased.
11—

**(c) Maintenance Cost**

1—None.
2—About same as conventional. Lubrication costs greater on link-type. Trouble sources on these have been excessive breakage and wear in the lug holder area. Presently we cut off built-in lug holder and use wooden hold-up block which increases life of picker stick and lug.
3—Good.
4—
5—Very high so far.
6—Not enough experience to determine.
7—
8—
9—
10—If parallel is left tight there is very little maintenance.
11—

**(2) Give your experience with high density pickers. State type loom used, picks per minute and picker life.**

1—No experience.
2—Not familiar with term "high density."
3—None.
4—None.
5—No experience.
6—Satisfactory—40" X2, 44" X Draper—194 PPM, 176 PPM—7-8 mos.
7—No experience.
8—Have used high density pickers on E and K model looms at 180 and 176 picks per minute at 2,000 loom hours life.
9—Using some Gates White, T-5XX Pickers on 44" X2's, running at 188 p.p.m. Last about 6 weeks when other lasted from 4 to 5 weeks.
10—Have found fabric and rubber pickers unsatisfactory because shuttles are harder to box. This is on 50" X2 looms, 184 picks per minute.
11—

**(3) What experience have you had with binder material other than leather? State type shuttle used (wood, plastic or combination wood and plastic.)**

1—No experience.
2—Tried cotton felt with wood shuttles—life not good — quality poor. Cork (Armstrong) — wood shuttle — quality and life not comparable to leather.
3—No experience.
4—No experience.
5—Wood shuttles—cork binder—too hard.
6—No experience.
7—No experience.
8—Armstrong synthetic covering, starts up without shuttle bouncing or sticking after weekend shutdown. Lasts about three times the life of leather. We use Southern Durwood shuttles.
9—No other used except leather. Draper True Mold and Southern Moulded (shuttles—made from plastic).
11—Have had approximately 10 E-Model looms (40"—165 PPM) and 6 (X2 looms—185 PPM) with the front box plates covered with a composition material put out by Armstrong Cork.

Some of these looms have been running a year and still look good. Looms running a fiber clad shuttle.

**(4) What method do you use when cleaning loom at warp-out? Method of application.**

1—None.
2—Apply solvent with brush—wipe loom and parts with rags.
3—Air and brush.
4—Blow off with air and brush.
5—Compressed air.
6—Air hose and wipe with Varsol.
7—Spray and blow off.
8—Do not clean loom at warp out.
9—Automatic overhead blowing off system used for cleaning looms and warps except once every 30 days looms are cleaned by hand.
10—Blow pipe.
11—Do no cleaning when warp is out.

**(5) Has Unifil improved quality? Reduced costs?**

1—No Unifils.
2—Unifil has not improved quality. Reduced cost—yes.
3—Yes.
4—No. Overall cost reduced.
5—No experience.
6—No experience.
7—Have none.
8—No experience.
10—Have 180 Unifils. At present we cannot show any savings or improved quality. This is on 8's, 10's, 12's filling.
11—

## Quality Control

**(1) How do you measure stretch on slasher? Give type slasher, yarn number, number of ends, size section beams, construction, etc.**

1—Counter on squeeze roll and front Del. Roll. 31/s—4020—24" head, 40" 100x 56—3.75.
2—Front yards — Back yards / Back yards
3—Cocker Front Clock to sixe box 36" beams.
4—Johnson 9-can slasher. Varied counts and ends. 30" section beams.
5—3-can West Point. Yarn number 26's to 30's. No. ends—2132 to 5464, section beams 28", construction 87"—56x56; 40"—90x72.
6—West Point 7-can High Speed—60/1, 3800; 26"; 88 Slag.
7—Veeder Root Counter—Cocker Slasher —26's to 40's—3000 to 4500, 28" section beams.
8—Measure slasher stretch with yardage clocks.
9—West Point High Speed slashers. 25's, 26's, 30's yarn numbers. 1206 to 3208 ends with 30" section beams. Construction—soft filled sheeting, diaper goods and print cloth.
10—Stretch measured by stretch indicator or yardage delivery roll. Textile Shop 10 cylinder slashers. Yarn numbers 8's to 31½, ends 1300 to 8000, 30" head section beams run up to 22 per set, standard beam 504 ends.
11—From where yarn enters size box to the delivery roll. West Point—9 can slashers; 31's; 1784 ends to 3992 ends; 26" and 28" section beams.

**(a) What type instrument used?**

1—Veeder-Root.
2—Veeder-Root yardage counters.
3—Taylor.
4—Yardage clocks.
5—Brown.
6—West Point Stretch Indicator.
7—Veeder-Root.
8—Research checks with a stretch meter ever so often.
9—Weston stretch meter. Measure stretch between size box and delivery roll.
10—Brown.
11—Veeder-Root.

**(b) What per cent do you consider normal?**

1—1.50%
2—Varies with yarn types.
3—10 to 12.
4—1½%
5—1.3
6—2%
7—1.6%
8—1-1/4% is considered normal.
9—2½% stretch normal.
10—1½ to 2%
11—1.8% to 2.2%

**(2) What is your method of weighting section beams in creels?**

1—Weight on back beams.
2—
3—As doff off of warper.
4—One weighted brake rope/beam.
5—Rope with 2 lb. weight.
6—Rope and dead weight.
7—Roped weight.
8—By rope and different size weights per beam on back 2 beams.
9—Have pneumatic weighting system.
11—Rope and weight.

**(a) Do you leave some weight on from beginning of set to the end?**

1—Yes.
2—Yes.
3—Yes.
4—Yes.
5—Yes.
6—Yes.
7—Yes.
8—Yes.
9—No.
10—Yes.
11—Weight left on back beam at end of set.

**(b) Do you take some weight off during set? How much and when?**

1—No.
2—Yes—1 weight/warp at warp doff.
3—Yes—every 5,000 yards.
4—No.
5—When set is half off remove 1 lb.
6—1/3 off when beam is 1/3 down—2/3 off when beam is 2/3 down.
7—No.
8—Yes—1 weight at 2/3 full and another 1/3 full.
9—All weight removed when slasher speeding up or running at full speed.
10—Yes—start with 4½ lbs. end up with ½ lb.

# ——S.T.A. Report

11—1 weight off of all no pro when ¼th of set is run—all weights and ropes on one side when ½ set is run—all weights and ropes except back beam when ¾ of set is run.

**(c) Do you have a change in speed when some of the weight is removed?**

1—
2—No.
3—Very little.
4—No.
5—No.
6—Yes.
7—No.
8—No.
9—Yes.
10—Don't remove that much at once.
11—Speed will change when weights are removed—the degree of change will depend upon the number of ends on set with the weights removed being the same—Set up speed ranges for different sets—Speed range for one of lighter sets being 135 to 145 yards per minute and one of heavier sets 100 to 110 yards per minute. Our method of removing weights very seldom gets us out of this 10-yard range.

*(Continued on Page 68)*

# The Loomfixer And His Job

**Part 30**

## ALIGNING THE LOOM REED IS A PRECISION JOB THAT SEPARATES THE SKILLED FROM THE UNSKILLED

**By WILMER WESTBROOK**

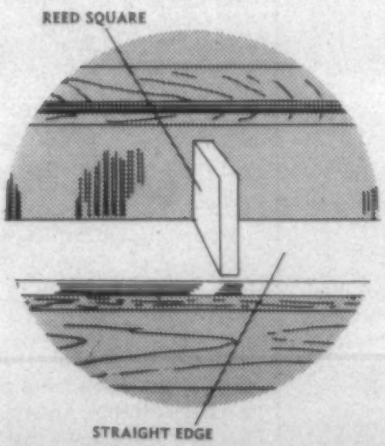
ONE of the most rigid tests of a loomfixer's skill is that of aligning the reed. This is precision work that requires skill and know-how. There are any number of symptoms of an incorrectly aligned reed. Among them are:

(1) Shuttle with washboard back—vertical ridges and grooves on the back surface of the shuttle.
(2) Back surface of the shuttle wearing unevenly.
(3) Front box cover wearing or being struck by the shuttle.
(4) Shuttle wobbling or vibrating as it enters the box.
(5) Shuttle entering the box unevenly or slapping the box.
(6) Shuttle flying from the shed.
(7) Reed or back boxes worn or scarred by the shuttle.

The first thing to do when any of these symptoms appear is to see that the shuttle race and lay ends are aligned. These parts can be checked by using an 18 or 24-inch straight edge. The shuttle race should be aligned with the flat surface of the lay-end—not with the bevelled end.

It is necessary to remove some wood from the top of the lay with a rasp or chisel to lower the lay ends or shuttle race. Insert a shim of light metal or stencil board to raise them. Tighten all bolts or screws securely.

The reed must be squared before it can be correctly aligned. To accomplish this, tighten the reed cap with an empty reed in place. Lay a straight edge on the shuttle race and place a reed square on the straight edge. The straight edge must be used because the wood of the shuttle race is often slightly worn and does not have a true flat surface.

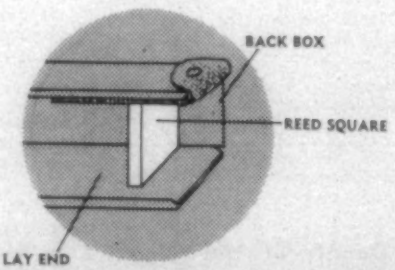



**Both the straight edge and the reed square should be used to square the reed to the shuttle race.**

If the reed is not exactly flush with the reed square at both top and bottom of the square, remove the reed cap and either remove some wood from it where it fits onto the sword or place a shim on it, whichever is required. A shim will pull the top of the reed forward and filing off some of the wood will move it back. Small adjustments can be made by removing some of the wood at the top or bottom of the reed cap with a rasp. Removing wood at the top of the reed cap will pull the reed forward and removing it at the bottom will pull it back because the reed cap is slightly tilted from its vertical position by this adjustment.

When it is necessary to shim the reed cap, use square pieces of metal or tough plywood that will cover all the surface where the reed cap contacts the sword. Nail the shim securely to the reed cap.

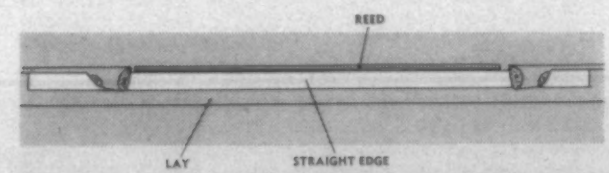
Never use shims of cardboard or other soft material for the reed cap or shims that will slip out of place when the reed cap is loosened.




**Use the reed square to check the back box plate as it is being aligned.**

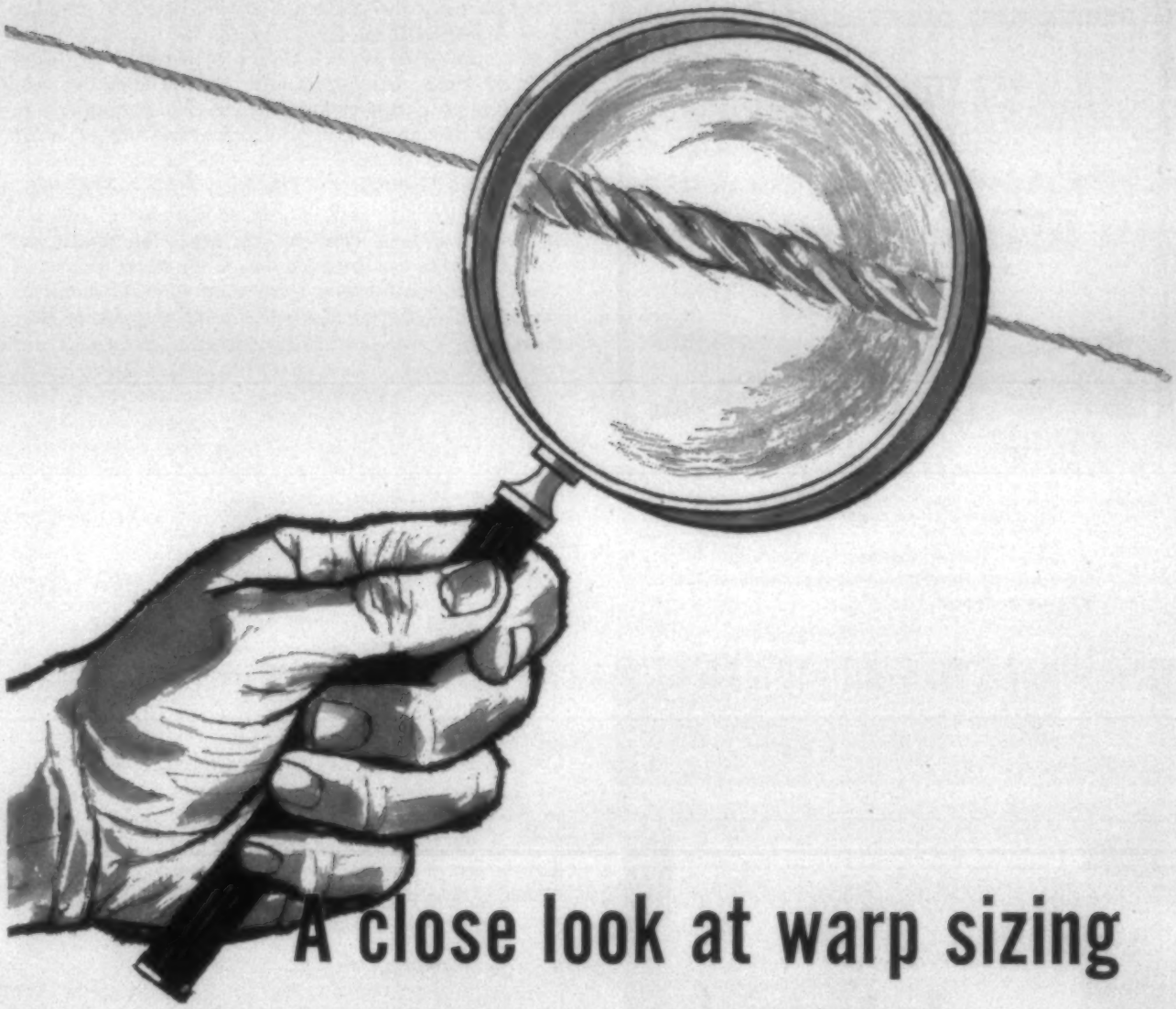
When the reed has been squared, use the straight edge to align the back box plates to it. A long straight edge that reaches from one shuttle box to the other is best for this purpose. A short 18 or 24-inch straight edge can be used with the long one and is slid back and forth or rocked to see where adjustments are needed.

The slower speed looms such as the E and L models should have the reed and back box plates exactly in line. Higher speed looms should have the reed about .008 to .016-inch back of the box plates. To make this adjustment, have the straight edge resting against both back box plates with a clearance between the straight edge and the reed of one or two standard drop wires.




**The reed on high-speed looms should be aligned slightly back of a straight line between the two back box plates.**

Looms with fixed reeds have back box plates with either adjusting screws or filable pads. To align the box plates equipped with adjusting screws, loosen slightly the cap screw that holds the plate to the sword and turn the screws to make the necessary adjustment. Keep the cap screw tight enough to



# A close look at warp sizing

Uniformly sized, individual warped yarns provide fast, easy weaving and result in a perfect cloth. Clinton Starches are designed to reach every last end with consistent sizing which reduces friction, smooths fuzzy yarns and minimizes shedding at the slasher and loom. The results are unchallenged quality in all fibres from hard to weave poplins to breezy summer weights. To weave the most profitable sales story — count on reliable Clinton Starches.

**Technical Service Always Available**

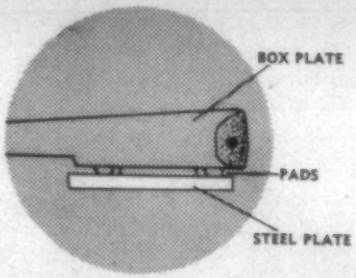
**CLINTON CORN PROCESSING COMPANY**

**CLINTON** **CLINTON, IOWA**

hold the plate firmly to the sword while the adjustments are being made and then tighten it securely when the plate has been correctly aligned.

Box plates with pads are aligned by removing the plates from the loom, placing them in a vise, and filing the pads. It is often necessary to build up the surface of the pads before filing and this can be done by brasing or welding soft metal onto them. Do not use metal that is too hard to file and do not overheat the plates.

A metal shim can be made for the box plate by taking a square piece of sheet metal the same size as thte contact surface of the plate and drilling a hole in the center for the cap screw. Never use for these shims drop wires, cardboard or any other like material that will slip out of place or wear easily.




**A square piece of flat steel plate can be used as a gage to check the pads on the back box plates as they are filed.**

When aligning the box plates it is very important to file the pads evenly so that one of the pads will not be so high or low that the plate will rock when fitted to the sword. A flat piece of steel makes a good gauge to check the pads as they are filed.

When the box plates are put in the loom, check and see that the end of the cap screw doesn't protrude and cut the shuttle. If the screw extends through the plate, remove it and place another washer on it or use a shorter screw. Also check the screws in the shuttle race and lay end to see that they are tight and that the heads are countersunk so that they will not cut the shuttle.

# Wool Manufacturers Told The Administration Doesn't Consider The Textile Industry Expendable

## MEMBERS OF N.A.W.M. AT THEIR ANNUAL MEETING HEAR ASSISTANT SECRETARY OF COMMERCE PLEDGE SUPPORT

MEMBERS of the National Association of Wool Manufacturers were told at their recent annual meeting that the wool textile industry is not considered expendable by the Kennedy administration. Hickman Price Jr., assistant secretary of commerce for domestic affairs and chairman of the special interagency textile subcommittee, told the members of the association meeting at the Waldorf-Astoria in New York, May 4, that the Kennedy administration and the Department of Commerce "are determined that the textile industry, including the wool textile industry, shall not pass from this land."

Price reported that the president had said to leaders of the textile industry, "I understand your problem and I am going to do something about it." The president made known a seven-point program of assistance to the industry.

He said the most important points of the seven were the means available under national security provisions; the State Department responsibility for attempting to seek means of voluntary quotas with supplier nations within a reasonable time; and the Commerce Department's responsibility on research and development.

"Once having determined the industry is not expendable by dumping of products of low-wage cost countries in the U. S. beyond a reasonable point, I in the role management can look forward with confidence . . . I would think in terms of modernization," Price said.

It is an undeniable fact, he pointed out, that American plants are reaching an alarming state of obsolescense—81% of every machine and tool in use was produced before 1946, while in Western Europe 80% was manufactured after 1950. In Japan the figure is slightly less than 80%.

Couple modern foreign equipment with low-wage labor costs and it adds up to a fact that American industry has been living solely on principle. Price pointed out that the administration could not shut off imports totally, but that it would expect reasonable control of imports.

### Apparel Goods Demand Increases

Martin Gainsbrugh, chief economist with the National Industrial Conference Board, told members of the association that the demand for apparel and apparel goods has markedly improved in the last three months and may mark the reversal of a long-term curtailment in its share of the after-tax dollars.

Gainsbrugh noted that three decades ago $11 out of every $100 spent of disposable income went for clothing and shoes—in the early '50s it was $9 per hundred and in 1960 it was less than $9 per $100.

This population stimulus is now being further reinforced as the postwar baby crop crosses the 15-year threshold and comes of dress-up age. Last year about 2.8 million youngsters moved into this clothes-conscious category. This year about 3.4 million will do so, and in 1962, 3.8 million will cross into this area.

Gainsbrugh pointed out that consumer spending for other types of non-durable goods should remain firm and that week by week more people expect better job opportunities and higher income in the coming months.

### Four Point Program

Alfred Eisenpreis, director of research of Allied Stores Corp., New York City, suggested a four-point program for wool textile manufacturers to replace what he called the industry's negative attitude toward both domestic and foreign competition. Speaking at the luncheon meeting, Eisenpreis said that the partial liquidation of the industry was unwarranted, unjustified and unnecessary in the light of the American post-war economy.

He urged wool manufacturers to: identify consumer markets and buying patterns as basis for specific progressive marketing; sell products to the ultimate consumer; emphasize fashion and quality features of woolen and worsted fabrics—and put price competition into proper perspective, ours is not a depression economy; think in terms of growth.

Eisenpreis said that the industry's potential for the future looks good. "American buying habits, age and employment patterns will bring about many conditions which could busy your looms," he said.

### Fabric-Foam Laminates

The advantages and possibilities of foam laminated fabrics were the subject of a seminar chaired by J. B. Goldberg, New York textile consultant. Goldberg said that the "use of polyurethane foams for laminating with apparel fabrics started in this country only a few years ago, primarily to provide a new form of lightweight thermal insulation for use in outerwear and they appear to be finding ready acceptance in meeting the demand for insulated garments with a minimum of added weight."

C. C. Thacker Jr. of Nopco Chemical Co. Pointed out that the urethane foams have excellent resistance to water, salt solutions, synthetic detergents, boiling water and steam and moderate resistance to dilute acids and alkalies. Both tensile strengths and elongation of the foams are very good when compared to other interlining materials, he said. Thacker also cited the good tear strength of the foams as compared with other interlining materials.

A. J. Callahan, manager of textile sales in the foam division of Scott Paper Co., forecast that fabric-foam laminates in apparel provide equal warmth at a fraction of the weight and bulk, neat and trim appearance, plus complete wrinkle and crease resistance because foam, in attempting to regain its natural dimensions, carries the fabric with it.

If mills approach lamination from a long-range view, he

said, they will want the equipment in their own plants with the laminating process controlled every inch of the way.

### Election Of Officers

Wilkinson

In the election of officers, Edwin Wilkinson, full-time executive officer, was renamed president and Glen F. Brown was re-elected secretary-treasurer. Five industry leaders were elected vice-presidents of the association. They are: Hugh G. Chatham, Chatham Mfg. Co., Elkin, N. C.; Roger M. Grimwade, Charlton Woolen Co., Charlton City, Mass.; Herbert Pleet, Yorkshire Worsted Mills, Lenni, Pa.; Frederick W. Tipper of New York, Cascade Woolen Mill, Oakland, Me.; and Horace C. Weston, Mayflower Worsted Co., Kingston, Mass.

Named directors at large were George Asnip, worsted division of Deering Milliken Inc., Pendleton, S. C.; H. King Cummings, Guilford (Me.) Woolen Mills; Morton H. Darman, The Top Co., Boston, Mass.; Edwin L. Hubbard, Packard Mills, Webster, Mass.; J. A. Meehan, woolen division, Deering Milliken Inc., Union, S. C.; Harry S. Stern Jr., Bachmann Uxbridge Worsted Co., New York; and Arthur O. Wellman, Nichols & Co., Boston.

Elected group directors were Walter D. Cassel, Energetic Worsted Corp., Bridgeport, Pa., Bradford system sales yarns; Robert W. Klemer, Faribault (Minn.) Woolen Mills Co., blankets; William Barnet II, William Barnet & Son, Rensselaer N. Y., fiber processors; Whitney Stevens, J. P. Stevens & Co., New York, woolen men's wear fabrics.

William Davis of Bachmann Uxbridge Worsted Co., a division of Indian Head Mills, is the new chairman of the Collateral Group of the N.A.W.M. He succeeds Ames Stevens Jr., Ames Textile Corp., retiring chairman. Three new members were elected to the group's steering committee. They are: Selby Baron, J. P. Stevens & Co.; Paul A. H. Kollins, Pacific Mills Worsted Co. and Raeford Worsted Co., divisions of Burlington Industries Inc.; and Harry D. Rogers, Chatham Mfg. Co. The collateral group is composed of sales and merchandising personnel in the New York offices of N.A.W.M. members.

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# S.T.A. Report

*(Continued from Page 63)*

## Air Conditioning & Maintenance

ACTING as moderator for a discussion on air conditioning and maintenance was Harry Barbrey of Woodside Mills, Greenville, S. C.

*Moderator:* How many plants have adopted some type of preventive maintenance program in the last ten years?

*Mill A:* Would you give your definition of preventive maintenance?

*Moderator:* Preventive maintenance has many different names. We in the Southern textile industry refer to it as time study, but the mid-Western and Northern states call it work sampling. Basically it's the same wherever you go.

The term means that a non-productive department, the maintenance department, keeps records on machines such as: periodic inspection; cost control; how many times the machine has been inspected; and overhaul reports. These and other records could be used to determine whether it would be more profitable to keep the machine and repair it or to junk it and buy a new one.

*Mill B:* Don't you think that the biggest job is going to be selling management on the idea that it'll need a new personnel set-up to keep records?

*Moderator:* There is not as much clerical work as it may seem. I know three mills which entered this type program and the clerical work for each took only about four hours a month.

*Mill B:* Some companies are probably like ours. You can't sell top management a formal preventive maintenance program all at once, but you can enter into this thing a little at a time. We started keeping our own personal records on machinery just to see what they were doing and soon management was coming to us for these records. We still don't have a formal program, but we have preventive maintenance anyway.

*Moderator:* There you have the basis for a preventive maintenance program. Its purpose is not only to keep machinery in good shape but to reduce costs. You say, well, how are you going to reduce costs when you have to have additional personnel?

Recently I heard a man say that he knew of a group of plants that spend over $2 million a year for overall maintenance supply cost. If you could save 10% of that, you could pay for any preventive maintenance program.

We know that, today, with the advances in modern machinery, we are going to have to train younger people for these jobs. Particularly are we going to have to train them for new air-conditioning and refrigeration machinery. We'll probably have to elevate them to technician status.

*Mill C:* I would like to hear some examples of how mills are training their men for these jobs. There isn't enough maintenance work on the job to train them there.

*Moderator:* The man that's put on this job must have a fair knowledge of electronics and electrical equipment. To answer your question, some companies are sending their men to schools to learn centrifugal or reciprocative refrigeration, while some older companies are using old pneumatic and electronic controls to train their men.

*Mill C:* Management is not going to put a lot of money into training these people. By present training standards, it just costs too much money.

*Mill D:* It looks like we're going to be forced into a training program of some kind. The men already trained in this field are paid so much they won't work for what we can pay them.

*Mill C:* Management will not yet invest money in that type of man because they are looking back to the old humidifier days. They are trying to upgrade the humidifier men to handle this new equipment.

*Mill D:* This shows up my point. Management will not pay a technician or good air-conditioning man enough to hold him and therefore we're going to have to train them.

*Moderator:* This all goes eventually back to the plant engineer. In a sense, today, 98% of the gripes coming out of the production departments are directed at the air-conditioning and humidification systems in a plant.

If management would recognize the merits of a preventive maintenance program, then they would know at all times what shape a piece of machinery is in. They would be able to put the machinery in first-class shape. It would then be up to the production people to get the work out.

In building a new plant, take the costs that go into that plant and the people who assume the role of upkeep for that plant and you'll find that the maintenance department has responsibility for over two-thirds of the costs.

*Mill D:* In time, do you think that all loomfixing, spinning fixing, maintenance, etc., is going to come under the plant engineer?

*Moderator:* Yes, it will. It is felt in Northern mills that all repair and maintenance work should come under the maintenance department and that production should be the concern of production people. I think that in the next five years, the Southern textile industry will move in that direction too.

*Mill F:* Can anyone here give me the before and after effects of installing air-conditioning and refrigeration in spinning?

*Moderator:* There are a lot of intangible items that are obtained through this system, and I don't think that you can pin them down. The prime concern for a system such as you mentioned is the flexibility of it. I know of instances where we have lowered our relative humidity to as low as 41%. The only way that you can maintain conditions in a particular area lower than surrounding areas and do it efficiently is with air-conditioning and refrigeration. However, there is only a very narrow range, some eight to ten degrees, that can be obtained with the system and some in management question the capabilities of the system on these grounds.

*Mill F:* Would you say that it is necessary to hire more personnel when you put this system in?

*Moderator:* I know of one illustration. The General Electric Co. put in a preventive maintenance program and for every eight people it eliminated, the company hired one for the maintenance department. In the textile industry, when eight people are eliminated, the company gets rid of a maintenance man.

*Mill D:* Well, how do you inform management on these things?

*Moderator:* Here's how we got our maintenance program off the ground. We hired an electrician for four hours a week to come in and check all the motors in our plant. He would give an outside check, without going into the windings of the motor or anything, and grease them. In two years we didn't have a motor of any kind burn out. Our motors for the most part were not fully loaded during that time.

*Mill F:* Are all of your looms motor driven?

*Moderator:* We have one plant that still uses belt drives; all others are motor driven. As I've said, none of them are fully loaded.

*Mill G:* One of the best ways to inform management of the advantages of preventive maintenance is to advise them of what needs to be done to a machine and then ask permission to fix it before some bad damage is done. Keep sufficient records of such reports as insurance against management's jumping on you if they don't give permission and the motor or what have you burns up.

*Mill H:* In our mill, the plant engineer keeps a record of our complete maintenance program and turns a copy of it in to management. When an inspection is made of a piece of machinery, notations are made at the bottom of the inspection form as to what it would take to put that machine back into shape. This is also turned in to management.

*Mill I:* Has anyone gotten by for five years without greasing sealed ball bearings?

*Mill B:* We've had some running 15 years.

*Mill D:* Ours have been running eight years without any trouble.

*Moderator:* Would you say that it would be good insurance to replace these bearings over a period of time?

*Mill E:* We had sealed bearings on some of our looms and spinning frames and we kept losing one every once and a while. We did away with the sealed bearing and replaced it with one that you have to grease. Once every six months we take the bearing out and wash it down. Then we put it back into the frame with fresh grease.

*Moderator:* About the average for sealed bearings is from eight to ten years. Most of the mills haven't had too much downtime on that particular type. There are some people who recommend replacing or repacking them every five years. To get back to air-conditioning for a moment, it comes to my mind that the people who have to read relative humidity off of charts or from a wet-dry bulb don't really know how to do it. I've tried to impress on these people that unless you put in lab conditions, plus or minus 2% is the best you can do. We must teach them how to use a psychrometer and do it correctly. By doing that we will have less trouble in these departments. This is our most important problem along with getting the equipment cleaned up on the weekends as it should be.

*Mill H:* In a weave room, many fellows don't believe that they have any humidity unless they see the mist coming out of the humidifiers.

*Moderator:* Probably the ones that have that attitude also

have their production problems.

*Mill I:* Have any of you had any trouble with these Trane air-conditioners?

*Moderator:* We have two of them and the only trouble that we've had has been with the starter.

*Mill I:* What kind of starters do you have?

*Moderator:* Allen & Bradley.

*Mill D:* We had some trouble with the leads on the motor of one of our machines. We had stopped it off for the second Winter and when we started it up the next Spring, it had some vibration in it. We had had a tube rupture, letting moisture get in the machine. That mixed with the freon and formed corrosion on the wheels, which got them out of balance. We had to send them back to the factory to get them balanced. The insurance man came along while I had it torn down and wanted to do some checking himself. He found that a cable had absorbed moisture and had swelled up to two or three times as large as normal. The insulation had popped from the cable and had left it exposed. If it had hit another cable it would have burned the motor out.

*Moderator:* We try to go into each of our machines once a year. We take all the oil out and check all the bearings, cables, leads, etc. Unless you maintain those machines and keep the moisture out of them, you can count on replacing them.

*Mill D:* If you don't spring a leak in your tubing, keep all your joints good and tight and have a good vacuum system and use it right, you won't have any trouble with moisture.

*Mill D:* When you tear your machine down, do you check everything including the motor bearings?

*Moderators:* Yes, we do. We check motor bearings on our centrifugal machines where we can get to them. The machine is completely gone over and is ready to be put back on the line.

*Mill G:* Even with the new water treatments, do you still have to go into the machine?

*Moderator:* Not as often, but we still haven't found a chemical or water treatment that will solve our problems. We can control them to a certain extent.

*Mill A:* Doesn't the air-conditioning company's service contract cover such things as that?

*Moderator:* You'll find that most of the air-conditioning companies will recommend using a water treatment. As far as their assuming responsibility, I don't think so. That's strictly up to the plant's maintenance shop.

*Mill J:* We have our supplier inspect our equipment twice a year—the Fourth of July shutdown and the Winter shutdown. We also have a factory service man to come down and work with our men. They tear the units down, check the linings and go through the centrifugal unit completely. His trip costs our company about $200. We feel it is well worth it because all towers are checked by him and when we start up again, we feel we are safe for at least another six months.

*Mill C:* How often do you paint your fans and do you have trouble keeping them painted?

*Mill D:* Most of ours are aluminum, but we have one that has to be painted and we haven't found a paint that will stay on it.

*Mill E:* I do mine once every three years.

*Mill D:* What type paint do you use?

*Mill E:* I don't use a paint. I use a coating. Its tradename is No-Oxide. We use a fiber glass coating for the other parts.

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

# PERSONAL NEWS

Howe

Frederic C. Howe Jr., president of Crompton & Knowles Corp., Worcester, Mass., is the first American industrialist to join the board of directors of the Societa Nebiolo, producer of graphic equipment, textile machinery, machine tools, type faces and iron castings for worldwide distribution. Societa Nebiolo manufactures Crompton & Knowles weaving equipment under a license arrangement for European sales. None of its textile machinery production is imported into the U. S.

Louie Burkes, formerly superintendent of Calhoun Mills of B. I. Cotton Mills, Calhoun Falls, S. C., has been named manager of B. I.'s Postex Cotton Mills, Post, Texas, succeeding R. J. Jennings who is retiring. Burkes, a graduate of the University of Alabama, has been associated with B. I. for the past three years. Prior to that he was with Muscogee Mfg. Co., Columbus, Ga., and Opelika Mfg. Co. at Hawkinsville, Ga. Jennings had been with Postex since 1953. Prior to that he was with West Point Mfg. Co. A native of West Point, Ga., and a graduate of Georgia Tech, he will continue as a consultant for B. I.

Lewis L. Bowen has been named general superintendent of the four plants of Alice Mfg. Co. in Easley, S. C. Bowen was formerly superintendent of the Foster Plant. He is succeeded in the capacity by Lowell Southerland. Sam G. Owens has been promoted from superintendent of the Elljean plant in Abbeville, S. C., to company engineer. Wallace C. Houston succeeds Owens at Elljean.

Robert E. Vidal has been named manager of the Greensboro, N. C., division of Dow Corning Corp., Midland, Mich. The firm now has in Greensboro its textile emulsion plant, silicone specialties manufacturing and sales and new product engineering laboratories. Vidal will administer these activities and co-ordinate them with Midland.

Louis P. Batson Co. has announced the appointment of J. Morgan Ruppe and Addie C. Bland to its sales organization. Ruppe is a former vice-president and manager of F. A. Young Textile Repair Inc., Gastonia, N. C. He has also been associated with Ideal Machine Shops of Bessemer City, N. C. He will cover the central North Carolina and eastern South Carolina territory for Batson. Bland was formerly general overseer of weaving at the Cleveland Plant of J. P. Stevens & Co. in Shelby, N. C. For the past two years he has been sales representative for Guthrie Machine Shops in Gastonia. Bland will cover western North Carolina and central South Carolina as well as the extreme eastern portion of Tennessee.

Griffin

James B. Griffin, general superintendent of Waverly Mills Inc. at Laurinburg, N. C., was named "Man of the Year" by the North Carolina State College Chaper of Phi Psi, professional textile fraternity, at the group's recent annual banquet in Raleigh, N. C. Ben S. Bellamere of Reading, Pa., national president of Phi Psi, made the award to Griffin, citing him as the textile executive in North Carolina who made the most significant contributions to the textile industry last year. Griffin graduated from North Carolina State College in 1927 with a B.S. degree in textile manufacturing. He was a member of the State College Eta chapter of Phi Psi as a student. He has worked in the textile industry since his graduation from college except for a tenure as a teaching fellow in the college's School of Textiles and one brief period of work in another area.

Horace W. Buchanan, formerly superintendent of Erlanger Mills, Lexington, N. C., has been named technical superintendent of the Osage Division, Reeves Brothers Inc., Bessemer City, N. C. Buchanan joined Erlanger as assistant designer in 1941, and had been superintendent the past ten years. He is a past chairman of the Northern North Carolina-Virginia Division of the Southern Textile Association, and is currently serving on the association's board of governors.

Albert G. Myers Jr. has been elected president of Textiles Incorporated and Threads Incorporated, succeeding John Land, who died recently. Textiles Inc. employs some 3,000 persons at 11 spinning plants and three thread plants in the Gastonia, N. C., area. Myers was formerly vice-president and treasurer. . . . T. R. Hosick was named secretary and treasurer of the organization. Hosick was formerly secretary. He has been with the company for 28 years. . . . John Koppen was named a vice-president of Threads. He moved up from assistant vice-president and general superintendent of Threads.

Ray Taylor, superintendent of the Cateechee, S. C., plant of Woodside Mills, has been named president of the newly organized Pickens County Textile Club.

Cone

Sydney M. Cone Jr., president of the research and development division of Cone Mills Corp., Greensboro, N. C., has been elected a trustee of The Johns Hopkins University. Cone is also vice-president and director of Otto B. May Inc., dyestuffs producer; vice-president and director of Olympia Chemical Co., polyurethane foam producer; and a director of Cortley Fabrics Co. Cone is one of six alumni trustees, one of whom is elected each year at the annual meeting of the Hopkins board to serve a six-year term. He was nominated for the

trusteeship by the Hopkins alumni association.

Edwards

Dr. Robert C. Edwards has been named to the board of directors of Draper Corp., Hopedale, Mass. Dr. Edwards is president of Clemson College, Clemson, S. C. For over 20 years after his graduation from Clemson College in 1933, Dr. Edwards was associated with the textile industry and became treasurer and general manager of the Abbeville Group of Deering-Milliken Mills in 1948. In 1956 he was appointed to the position of vice-president for development at Clemson College. Dr. Edwards was elected president of Clemson College in 1959.

R. L. Huffines Jr., formerly president of Textron Inc. and Burlington Mills Corp., New York City, was recently married to Mrs. Jane DeBow Welles of Rockford, Ill.

W. Brock Amos has been named technical sales representative for Georgia, Alabama and Tennessee for Wica Chemicals Inc. Amos will be located in Columbus, Ga., and he will service the textile industry in three states with polymer and copolymer emulsions, latex compounds, thickeners, general textile specialties and auxiliaries. . . . Oliver J. Goldstein has been named a technical area representative for the company. Goldstein has had ten years of experience in textile chemical production, technical applications and sales. He has been assigned to a primary technical area consisting of South Carolina, western North Carolina and specific territories in Georgia. Goldstein majored in chemistry at the University of Chattanooga and, as technical area representative, will be based in Spartanburg, S. C., where he is a member of the Palmetto Section of the American Association of Textile Chemists & Colorists.

**THIS BRIGHT-EYED, WET-EYED young beauty from the University of New Mexico is this year's "Miss Wool of America." She's Gayle Hudgens, 20 years old, and she'll spend the months ahead touring the U. S. as the industry's Ambassadress of Good Wool. Described as "all wool and a yard round," she measures 36-23-36. A sophomore majoring in Latin American studies, she represented the U. S. in Latin America as a Junior Good Will Ambassador in 1958.**

W. Andy King has been named sales representative in the South Carolina area for Clinton Corn Processing Co., Clinton, Iowa. A graduate of Furman University, King has been engaged in motor freight sales for Roadway Express and Hennis Motor Lines during the past four years.

Child

William K. Child, formerly vice-president and general sales manager of Draper Corp., Hopedale, Mass., has been named executive vice-president and general sales manager. . . . J. Craig Huff Jr., formerly an assistant vice-president, has been named vice-president. . . . Rodney C. Southworth, acting director of research, has been named to that post.

C. S. Clegg, president and treasurer of Globe Mills Co., Mount Holly, N. C., has asked that he be relieved of his official duties for health reasons. P. S. Smith, who has previously served as assistant to the president, was elected to fill the office of president. J. L. Davenport was elected treasurer.

Theodor V. Shumeyko has been promoted to the position of manager, public relations, of The Chemstrand Corp. Shumeyko will be responsible for public relations activities and for product information and publicity on both trade and consumer levels. He joined Chemstrand in 1957, as product information co-ordinator. He was promoted to product information manager in 1958.

R. W. Malburg has been named field supervisor of Kurt Salmon Associates, based in the company's Greensboro, N. C., office where he will assist Karl Striegel, vice-president and chief engineer of the company in serving clients in that territory.

American Enka Corp. announces new assignments in its rayon and nylon divisions for H. G. Heedy, Paul E. Dochety, Jack C. Webb, Sidney M. Smith and J. R. Graham. . . . Heedy, former assistant director of market development, has been appointed product manager for rayon staple fiber. He has responsibility of directing and co-ordinating all phases of Enka's rayon staple operation, including marketing, manufacturing and introduction of new products. . . . Dochety and Webb, formerly technical sales representatives, have been named assistant sales managers for rayon industrial yarns. They will handle direct sales contacts with industrial yarn users and will work with the company's district sales offices. . . . Smith, formerly assistant manager for rayon staple, becomes an assistant sales manager for nylon textile yarn. His area of work will be in warp knitting, woven fabrics, upholstery fabrics and in new yarn outlets. . . . Graham, who previously served as sales representative in the Chattanooga, Tenn., district sales office, has been appointed assistant sales manager for rayon staple.

Szaloki

Dr. Zoltan Szaloki has been named acting director of research and development for Whitin Machine Works, Whitinsville, Mass. Dr. Szaloki succeeds E. Kent Swift who has resigned. Dr. Szaloki, who has been director of research, has taken on the extra duties until a permanent sucessor to Swift is named.

John T. Higgins, associate tax counsel of Burlington Industries, Greensboro, N. C., has been elected a vice-president of the company. Higgins joined Burlington in November 1949, as assistant tax counsel after having served as assistant manager of the tax department of Deering Milliken & Co.

Four textile industry executives have been elected to the membership of the Controllers Institute of America. They are Julian R. Black, division controller, textile division, The Kendall Co., Charlotte, N. C.; William M. Butler, vice-president, Chatham Mfg. Co., Elkin, N. C.; Edward Connelly, comptroller, Cone Mills Corp., and J. Roy Lawing, controller, synthetics division, J. P. Stevens & Co., both of Greensboro, N. C. Established in 1931, the institute is a nonprofit management organization of controllers and finance officers from all lines of business.

Williams

Joe A. Williams of Spartanburg, S. C., has been newly assigned to represent the Louis P. Batson Co. of Greenville, S. C., in portions of North Carolina, South Carolina and northeastern Georgia. Williams joined the Batson Co. in 1953 and has represented it in Georgia, Alabama and Tennessee. He had previously been employed in textile mills in the carding, spinning and weaving departments. He is a graduate of the New York School of Design.

American Cyanamid Co.'s fibers division has realigned functions and responsibilities in its marketing department. The realignment is designed to provide better co-ordination of sales and merchandising in the division's overall marketing operations. William H. Kieffer, recently appointed director of marketing, heads the co-ordinated sales and merchandising organization. Martin B. Friedman is general merchandising manager and James B. McDonald, general sales manager. George P. Vescio, formerly manager of apparel merchandising, is now manager of market development. Others named

to the market development staff include Maurice Levin, designer, styles and fabrics; Norman L. Levin, manager, yarn and fabric development; and David Shieldkret, manager of quality control. Ruth Daly, formerly advertising manager for women's wear, was named to the newly created post of fashion director, women's wear. Jean Mitchell has been named advertising manager for women's wear. She was formerly women's wear assistant in the division's advertising and promotion department.

Bryce R. Holt Jr. has resigned from Peerless Woolen Mills, Chattanooga, Tenn., a division of Burlington Industries, to form the Holt Textile Sales Co., an organization for selling man-made and natural textile yarns, fibers and other related products. The company will be located in Dalton, Ga. Holt, a graduate of North Carolina State College School of Textiles, was a member of the sales staff of Peerless. Prior to joining Peerless, he was with the Industrial Rayon Corp. for five years.

**Bendixen**

Harold A. Bendixen has been elected president of Clinton Corn Processing Co., Clinton, Iowa, a division of Standard Brands. Bendixen succeeds Roscoe C. Wagner who retired recently after 41 years of service with Clinton. . . . Reynold P. Jurgensen has been named senior vice-president of Clinton with continued responsibility for production, engineering, operating, traffic, personnel, purchasing and research.

W. Morris Little, formerly of James Lees & Sons Co., has been appointed controller for Coronet Carpet Mills, Dalton, Ga. Little will be responsible for bookkeeping procedures and cost controls involving the company and its regional warehouse. He will be headquartered at the mill office.

J. B. Forbus of Bermis Bros. Bag Co., Talladega, Ala., was elected an executive committeeman of the Alabama Textile Operating Executives at the recent Spring meeting at Auburn University.

**Rettew**

Jack W. Rettew has been named sales manager for the Southern Divisions of Fletcher Industries, Cheltenham, Pa. Rettew will be headquartered in the Fletcher Southern Pines, N. C., division and will act as liaison between this plant and the large Fletcher operation in Statesville, N. C. The company said that it was necessary to create the new executive post to service the increasing volume of business, particularly in twisters and winders coming out of the Southern states. After attending the School of Textiles of North Carolina State College, Rettew worked in the purchasing divisions of Burlington Industries in Greensboro and Gastonia, N. C., following which he transferred to Burlington's Narrow Fabrics Division. During the past seven years, prior to joining Fletcher, he served with Textron Southern (now Amerotron Division of Textron) in Aberdeen, N. C., as purchasing agent.

W. Dan Hurst has been named vice-president and general manager of manufacturing of Candlewick Yarn Mills, subsidiary of Dixie Mercerizing Co. Hurst has been with the company since 1959, directing the manufacturing activities of its plants in Dalton and Royston, Ga.

E. Forrest Kulp has joined Industrialaire Co. of Charlotte, N. C., and will devote his time primarily to sales in the North Carolina territory. Industrialaire Co. installs humidification, evaporative cooling and air-conditioning equipment.

Alfred H. Randall has been named manager of the Salisbury, N. C., plant of Cone Mills Corp. Randall succeeds Stedman Morris, who becomes business manager. Randall was with Alabama Mills Inc., Birmingham, Ala., for more than 30 years.

Dr. W. Paul Moeller has been named director of marketing for AviSun Corp. of Philadelphia, Pa. Dr. Moeller, who had been serving as manager of the international department for AviSun, succeeds Henry E. Wessel, who has resigned. The new marketing manager will be responsible for all of

AviSun's sales and marketing activities. AviSun, an equally-owned affiliate of American Viscose Corp. and Sun Oil Co., manufactures and markets polypropylene polymer and film. Dr. Moeller was previously with Celanese Corp. of America.

Bonnar

J. Robert Bonnar, director of industrial and government relations for the chemical group of General Aniline & Film Corp., was elected president of the Vat Dye Institute at that group's fourth annual meeting. Bonnar succeeds James L. Naylor of American Cyanamid Co. Other officers elected to serve with Bonnar are: Keith R. J. Horner, Ciba Co., senior vice-president; Eric R. Herbertson, Arnold Hoffman Co., vice-president; and James Naylor, treasurer.

Dr. Jack C. Smith, a physicist in the Textile Section of the National Bureau of Standards, has been awarded the U. S. Department of Commerce Silver Medal for Meritorious Service. He was cited for "his valuable contributions to the science of textile physics during his service as project leader in the Division of Organic and Fibrous Materials and for highly distinguished authorship." Since joining the Bureau in 1954, Dr. Smith has supervised research on the response of textile yarns to impacts at velocities ranging between 10 and 1,000 feet per second, as well as in the measurement of wave propagation velocities, specific breaking energies and critical impact velocities.

Thomas Nash has joined The Kendall Co. as personnel manager of its Pelzer, S. C., plants. He succeeds H. M .Burrell who was transferred to the company's Bethune plant. Nash left Burlington Industries in 1957 to enter the personnel field. Since that time he has been with Guy Arthur & Associates of Toccoa, Ga.

Walter A. Qualman Jr., manufacturing manager of Peerless Textiles, Cleveland, Tenn., division of Burlington Industries, has been named plant manager. Qualman succeeds Color York, who recently resigned to enter other business. . . . Stephen O. Addison, manager of fabrications, succeeds Qualman as manufacturing manager. . . . J. D. Silver has been named to succeed Addison as manager of fabrications. . . . Donald O. Phillips has been transferred from the Rossville, Ga., plant to become administrative manager in Cleveland.

Gravlee

John G. Gravlee Jr. has been named president of Burlington Throwing Co., member of Burlington Industries Inc. Gravlee, who has been in charge of the division since June 1959, when he was named vice-president, will continue to make his headquarters at the Hillcrest Plant in High Point. Burlington Throwing Co. is a producer of stretch and specialty yarns for the hosiery, weaving and knitting trades.

Conrad G. Hurlimann has joined Geigy Chemical Corp., Ardsley, N. Y., as vice-president and director. Hurlimann will assist at the planning and management level in the company's general expansion and growth. Before his affiliation with Geigy, Hurlimann was, for several years, administrative vice-president and director of Pfizer International Inc.

Richardson

Richard C. Richardson of Concord, N. C., has been named technical representative of Moretex Chemical Products Inc., for North Carolina. Richardson has been technical superintendent of Kerr Bleachery of Concord for the past five years. Since graduation from North Carolina State in 1948 with a B.S. in textile chemistry, he has served in various technical capacities at Erwin Mills, Cone Mills and U. S. Finishing Co., as well as Kerr Bleachery.

Dr. Anton Peterlin, now head of the Physics Institute at the Technische Hochschule in Munich, Germany, has been named director of the Research Triangle Institute's new memorial, polymer research laboratory, called Dreyfus Laboratory. Recognized for his research in the rheological and optical properties of liquids and polymer solutions, Dr. Peterlin is credited with approximately 100 scientific publications.

Monica

Harold P. Monica has been named director of sales of the industrial division of L. H. Shingle Co. His headquarters will be at Worcester, Mass. Before joining the L. H. Shingle Co., Monica served for six years as sales manager of the Page Belting Co. He is a native of Hanover, N. H., and is a graduate of the University of New Hampshire.

# OBITUARIES

**John S. Abney,** 40, president and treasurer of Abney Mills, Greenwood, S. C., died May 11 of a heart attack in his car. A son of the founder of Abney Mills, Mr. Abney was named president and treasurer of the firm in 1959. He was also a member of the board of Erwin Mills, Durham, N. C., and of the American Cotton Manufacturers Institute. He is survived by his widow, two sons and a daughter.

**Mrs. Myrtle Rook Adams,** 63, vice-president of Adams Inc., textile machinery firm in Greenville, S. C., died recently. Survivors include her husband, S. J. Adams, two daughters and two sons.

**Raymond S. Bartlett,** 81, former executive of American Woolen Co. and Botany Mills, died May 3 at his home in Pass-a-Grille Beach, Fla. Mr. Bartlett served for many years as an advisor to government agencies on problems of the wool industry. He joined American Woolen in 1899 as a clerk. By the time of his retirement in 1931, he was general manager of the company's selling and manufacturing divisions. He came out of retirement in 1936 to join Botany Mills, then in the hands of receivers. When he retired from Botany in 1950 it was grossing $44 million annually. Survivors include his widow, a son and three daughters.

**Cason J. Callaway,** 66, former president of Callaway Mills Co., LaGrange, Ga., died April 12. Mr. Callaway was named president of the company founded by his father at 25. He served in that capacity for 18 years. He served during that time as president of the Georgia Cotton Manufacturers Association and was a director of the Cotton Textile Institute. Survivors include his widow, a son and a daughter.

**John Land,** 56, president of Textiles Incorporated, died April 12, at his home in Gastonia, N. C., after a long illness. Mr. Land joined Textiles in 1940 as secretary and treasurer. He was named president in 1959. Prior to joining Textiles he was assistant manager of a manufacturing plant of Kendall Mills. Surviving are his widow and a son.

# MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

GAFFNEY, S. C.—A section of Derry Damask Mill here was destroyed by fire recently. Damage was estimated at between $75,000 and $100,000. Firemen were able to save the main structure of the mill. A one-story building recently converted to working quarters and containing both machine and materials was completely consumed. The plant produces bedspreads. The company reports that construction will begin on a new finishing plant in the very near future. The mill has set up temporary operations in a rented building in the West End section of Gaffney.

NEW YORK, N. Y.—Lower profits and sales have been reported by Reeves Bros. Inc. for the third quarter and first nine months of the current fiscal year. For the quarter ended April 1, net profit was $81,050 as compared with $663,711 in the like quarter a year ago. Net sales totalled $17.2 million against $19.5 earlier. In the nine months ended April 1, net profit was $351,459 on sales of $46 million as against profit of $1.8 million on sales of $52.4 million in the comparable nine months of the previous year.

GASTONIA, N. C.—Trenton Cotton Mills here, together with another Trenton mill at Statesville, have been sold to Carolina Mills of Maiden. The sale was arranged through a stock exchange but no details were disclosed. Julius Abernathy of Newton is board chairman of both firms. Trenton will operate as a subsidiary of Carolina, under the management of Caldwell Ragan. The acquisition of Trenton will increase Carolina's sales volume by $4 million to an estimated annual total of $16 million. The enlarged company will increase its spindleage by 36,000 to a total of 80,000. The Statesville plant is expected to be modernized to produce combed knitting yarns and thereby diversify the types of yarn offered by the firm.

BONHAM, TEX.—A large portion of the Bonham Yarn Mill was destroyed by a fire May 5. Owner T. Lofton said that the loss will run into the thousands of dollars. Production will be halted about three weeks. The blaze destroyed the warehouse and part of the opening room. The firm employs eight persons.

SPARTANBURG, S. C.—Beaumont Mills of the Spartan group is proceeding with the construction of a $300,000 two-story addition which will connect present plants. The construction is not an expansion as such, the company points out, since it will add no employees. It will, however, enable the company to install wider Draper looms and rework some of its present Draper looms.

CEDARTOWN, GA.—The Goodyear Tire & Rubber Co.'s Cedartown textile mill, which produces tire cord fabric, is celebrating its 35th anniversary. Before purchasing the former Paragon mill as the first tire cord mill in the Southeast, Goodyear had owned four other fabric mills in the U. S. that were closed after comparatively short service. An experimental mill at Killingly, Conn., was bought in 1913 during early experimentation with the cord tire. A mill was built in Los Angeles in 1920 to serve the company's tire plant there. A New Bedford, Mass., mill was acquired in 1924, and another at at Passaic, N. J., was acquired just before the Cedartown purchase in April 1926. Equipment from the earlier mills went into the Cedartown operation and other mills overseas when the Northern mills were closed. The success of the Cedartown facility resulted in the start of mills at Cartersville and Rockmart, Ga., and at Decatur, Ala.

FORT MILL, S. C. — Springs Cotton Mills reports a 36% increase in net profits in 1960 and a 1.8% gain in sales. Income for the year was $18.7 million as compared with $13.7 million in 1959. Sales totalled $187.6 as compared with $184.3 million in 1959. As of December 31 the company had total assets of better than $95.9 million and liabilities of $9.4 million. This compares with $81.4 million in assets and $6.9 in liabilities at the end of 1959.

GRANTVILLE, GA. — A new firm for the production of industrial sewing thread is being established here by Fred Montgomery Jr., head of Pisgah Mills, Brevard, N. C., and Tidal Marsh Products Co., Dale, S. C. The firm will be called Applied Fiber Co. and has leased with option to buy buildings with some 29,000 square feet of floor space. Machinery is already being installed for an initial pilot sampling operation in carding, spinning, twisting, dye and winding.

KANNAPOLIS, N. C. — Cannon Mills Co. has purchased approximately $55,000 worth of Titan warp-tying equipment for its plants here and in Concord. The purchase is part of the company's modernization program. The new stainless steel units replace earlier type portable equipment. The company reports that it has deferred extensive building, machinery and operating improvements until the Federal Government makes known a decision with respect to curbing imports.

DURHAM, N. C.—Erwin Mills which was planning a $750,000 addition for its Plant No. 4 in West Durham is holding up those plans pending the city's study of tax valuation and water rates. Whether or not the company goes on with the addition will depend on the new water rates and new property valuations. The new building would be used to modernize the firm's bleaching, finishing and sewing departments. Erwin reports that its sales for the quarter ended March 31 were slightly improved over those of the comparable period of 1960, however, net profit was sharply reduced. Sales for the quarter were $16.2 million as compared with $16 million in 1960. Net profit was $362,008 as compared with $675,952 in 1960.

NEW YORK, N. Y.—The American Thread Co. reports that its 1960 earnings dipped to $663,430, but forsees better profits in 1961, as it continues "adjusting its operations and costs to changed conditions." Earnings during the previous year were $1 million. Company operations were somewhat curtailed during the last three quarters of the year, the report said. Slackening demand was cited as the chief cause. Garment and cotton yarn imports were also credited with having an adverse effect. Looking ahead, the company sees modernization plans and its recent mill consolidation measures as major contributors to any profit improvement achieved in 1961. The company invested over $3 million in new machinery and other capital improvements during 1960, primarily for spinning and related equipment at its Dalton, Ga., and Tallapoosa, Ga., mills. A portion of the funds also went into needed improvements in the Clover, S. C., and Willimantic, Conn., mills.

MCADENVILLE, N. C. — Imperial Yarn Mills has placed an order with Roberts Co., Sanford, N. C., for 50 new Arrow M-1 spinning frames totalling 15,000 spindles. Total cost of the installation is reported to be approximately $500,000. The new equipment will enable the company to reduce the number of spindles it operates by 4,000, substantially saving on operating costs. The new units are 25-inch wide models with all ball bearings. They feature the FC PosiWate pendular suspension drafting system and will be equipped with high speed rings. UnaRing Ballon control, AeroCreels and latch type bobbin holders, and UnitVac suction cleaning will also be incorporated.

SHERMAN, TEX.—Sherman Mfg. Co., member of Burlington Industries, recently celebrated its 70th anniversary with an open house. The company began operations on the same site 70 years ago producing seamless bags.

NEW YORK, N. Y.—Botany Industries has announced earnings after taxes of $228,000 for the first quarter of 1961, compared with $44,000 in the first three months of 1960. Operating revenue in the first quarter of 1961 totalled $20 million against $14.8 million in 1960. Net income after federal taxes was $228,000 in the first three months of 1961 and $44,000 in 1960. For the year 1960 Botany's operating revenue amounted to $63.3 million, compared with $76.7 million in 1959. After federal income taxes, net income was $1.7 million in 1960 and $4.1 million in 1959.

GAFFNEY, S. C.—The screen printing plant of A. P. McCauley Co. here has completed plans for a 30,000-square-foot addition, according to C. C. Melton Jr., vice-president and general manager. The company reports the addition will make room for an additional 100 employees but this has not been confirmed by the company. The plant presently employs some 300 persons on a three-shift, six-day production schedule. A 5,000-square-foot addition was completed earlier this year.

GREENSBORO, N. C. — Cone Mills Corp. has announced the purchase of eight sets of Permo spinning equipment from William Latham Ltd., England, for the spinning of yarns from its waste fiber. The equipment, to run 1s to 12s yarn, is expected to take much of the spinnable waste produced by Cone. The company reports that the market for spinnable waste has been cut by contamination with other fibers and by competition from foams. The new step is partially experimental and is expected to produce yarns pos-

sibly salable as thread or coarse fabric. The work will be done at the company's Proxmity Plant. Cone reports a sharp decline in earnings in the first quarter of this year as compared with 1960. Sales were off only slightly. Net earnings for the first quarter were $302,761 on sales of $46.6 million as compared with earnings of $1.1 million on sales of $47.5 million in the first quarter of 1960.

MADISON, N. C.—Madison Throwing Co. has announced its acquisition of the assets of Baldwin Processing Co. at Milledgeville, Ga. Joseph H. Hamilton, president and general manager of the Baldwin Co. is moving to Madison as vice-president in charge of sales. The Milledgeville manufacturing facilities will continue to operate as in the past. C. T. Sutherland, vice-president in charge of manufacturing for Madison, will be in charge of the Milledgeville plant. Leon Tucker will be plant manager at Milledgeville.

GLENDALE, S. C. — The Glendale mill of Indian Head Mills has curtailed operations as a result of the current depressed state of the print cloth market, according to R. Carl Dick Jr., vice-president and general manager of the greige and industrial fabrics division. The plant is now operating two shifts a day, five days a week. It was formerly on three shifts daily. "Higher raw cotton costs and continued depressed print cloth prices have made profitable operations increasingly difficult," Dick said. He added "the curtailment will prevent accumulation of unsold inventories." The reduced level of print cloth operations will continue as long as conditions warrant, Dick indicated, adding that since the current textile recession began last Fall, the mill has curtailed from time to time in order to avoid building unsold inventories. A number of new novelty constructions are being added to the production of the Glendale mill in hopes of finding new outlets which will be less subject to the violent fluctuations in volume and prices that have characterized print cloths. The new fabrics to be produced there include special nub and flake-yarn cloths, sateens and colored yarn fabrics. The mill previously made nothing but print cloths. Blends of polyester and cotton, colored yarn cottons and blends of solution-dyed rayon and cotton will also be manufactured.

NEW YORK, N. Y.—Consolidated net sales of $207.7 million for the three months ended April 1 have been reported by Burlington Industries Inc. In the comparable three months of 1960, consolidated net sales were $233.9 million. Net earnings for the three months were $3.9 million as compared with $10.1 million in the same three months of 1960. The 1961 earnings include non-recurring capital gains of $566,000. Consolidated net sales of $422 million were reported for the six months ended April 1 as compared with $464.6 million previously. Net earnings after taxes for the six months were $9.8 million. Net earnings for the six months ended April 2, 1960, were $21 million.

DANVILLE, VA. — Net earnings of Dan River Mills for the quarter ended April 1 were $1.3 million as compared with $1.9 million in the comparable period of 1960. Consolidated sales volume for the period was $37 million as compared with $43.6 million in the same quarter of 1960.

GASTONIA, N. C. — Earnings of Textiles Incorporated for the six months ended April 1 took a sharp drop as compared with the same period last year. Net profit was $596,800 on sales of $13.5 million as compared with earnings of $866,211 on sales of $15.4 million a year ago.

NEW YORK, N. Y.—Riegel Textile Corp. has reported net earnings of $601,493 for the 28 weeks ended April 15 as compared with $1.3 million in the same period of 1960, a drop of 53%. Sales were down to $41.8 million in the 28-week period from $50.6 million in 1960, a drop of 17%.

BOSTON, MASS.—The Kendall Co.'s earnings for the first 12 weeks of 1961 were in line with those for the similar period of last year, the company reports. Earnings for the first 12 weeks of 1961 were $1 million as compared with $1.1 million for the quarter last year. Kendall's sales increased from $25.6 million for the first quarter of 1960 to $25.9 million for the same period this year. Although average profit margins were well maintained, the company said, the increase in sales was not sufficient to offset higher selling expenses this year. Incoming orders in the textile part of Kendall's business have shown continuing improvement since the early part of the year, it said.

# *Textile Industry Schedule*

**For additional data (reservation requirements, membership requirements, program details, etc.) on activities listed here, contact name(s) shown in parentheses.**

**June 9-10 (F-Sa)—Annual outing, Piedmont Section, A.A.T.C.C., Grove Park Inn, Asheville, N. C.** (Sec.: E. P. Lavoie, Morningstar-Paisley Inc., Box 3622, Charlotte, N. C.)

**June 22-24 (Th-Sa)—53rd annual meeting, Southern Textile Association, Ocean Forest Hotel, Myrtle Beach, S. C.** (S.T.A., P. O. Box 1225, Charlotte 1, N. C.)

**Sept. 7-8 (Th-F)—Annual meeting, Combed Yarn Spinners Association, The Greenbrier, White Sulphur Springs, W. Va.** (Exec. Sec.: James H. Campbell, 427 W. Franklin Ave., Gastonia, N. C.)

**Sept. 14-15 (Th-F)—Annual Outing, Chattanooga Yarn Association, The Reed House, Chattanooga, Tenn.** (Chattanooga Yarn Association, Chattanooga, Tenn.)

**Sept. 15-16 (F-Sa)—Fall meeting, Palmetto Section, A.A.T.C.C., Clemson House, Clemson, S. C.**

**Sept. 21-22 (Th-F)—Fall meeting, Southern Textile Methods and Standards Association, Clemson House, Clemson, S. C.** (Howard L. Loveless, Exec. Sec., S.T.M.A.S.A., P. O. Box 10144, Knoxville, Tenn.)

**Sept. 21-22 (Th-F)—Annual meeting, Carded Yarn Association, The Cloister, Sea Island, Ga.** (Exec. V.-P.: E. O. Fitzsimons, P. O. Box 869, Charlotte 1, N. C.)

**Sept. 23 (Sa)—Fall meeting, Piedmont Section, A.A.T.C.C., Hotel Charlotte, Charlotte, N. C.** (Sec.: E. P. Lavoie, Morningstar-Paisley Inc., Box 3622, Charlotte, N. C.)

**Sept. 28-30 (Th-Sa)—National convention, American Association of Textile Chemists & Colorists, Hotel Statler, Buffalo, N. Y.** (A.A.T.C.C., P. O. Box 28, Lowell, Mass.)

**Oct. 5-7 (Th-Sa)—Annual meeting, North Carolina Textile Manufacturers Association, Carolina Hotel, Pinehurst, N. C.** (Sec.: T. N. Ingram, 1008 Wachovia Bank Bldg., Charlotte, N. C.)

**Oct. 7 (Sa)—Fall meeting, Alabama Textile Operating Executives, Thach Auditorium, Auburn University, Auburn, Ala.** (Exec. Sec.: Cleveland L. Adams, Auburn University)

**Oct. 12-21 (Th-Sa)—North Carolina Trade Fair, Charlotte Coliseum and Merchandise Mart, Charlotte, N. C.**

**Oct. 14 (Sa)—Fall meeting, South Carolina Division, Southern Textile Association, Clemson, S. C.** (Chairman: E. L. Ramey, Inman Mills, Inman, S. C.)

**Oct. 28 (Sa)—Fall meeting, Eastern Carolina Division, Southern Textile Association, School of Textiles, N. C. State College.** (Chairman: Gilbert C. Mays, Erwin Mills, Durham, N. C.)

**Nov. 8-9 (W-Th)—Chemical Finishing Conference, sponsored by the National Cotton Council, Sheraton Park Hotel, Washington, D. C.** (National Cotton Council, Ring Bldg., Room 502, 1200-18th St., N.W., Washington 6, D. C.)

**1962**

**Jan. 11-12 (Th-F)—13th annual Cotton Research Clinic, The Carolina Hotel, Pinehurst, N. C.** (National Cotton Council, Ring Bldg., Room 502, 1200-18th St., N.W., Washington 6, D. C.)

**(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday**


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Vol. 87 JUNE 1961 No. 6

# textile bulletin

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**TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.**

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## Why All The Cheers?

DESPITE all the spontaneous applause it drew, President Kennedy's Seven Point program for the textile industry is about as vague and timid as it could be. It offers no new approaches to the problems it concedes exist. Worse, it shuns the really effective proposals previously believed to have been under serious consideration; i.e., the imposition of a strong country-by-country, item-by-item import quota system; and elimination of two-price cotton.

Just how little the Kennedy Program offers can readily be seen by comparing it with the Pastore Committee recommendations.

(1) That quotas on textile mill products be established by country and by category of product.

(2) That the program of data collection and research instituted by the Business and Defense Services Administration be continued.

(3) That the Internal Revenue Service publish a revised schedule of depreciation rates, taking into account current industry practices, which would permit a more rapid write-off for tax purposes.

(4) That appropriate Government agencies expand, and initiate where necessary, textile research.

(5) That the two-price system for cotton be eliminated.

Last Summer, in a letter to Governor Hollings of South Carolina, President Kennedy outlined his pre-election convictions on the state of the textile industry as follows:

"... Clearly the problems of the (textile) industry will not disappear by neglect nor can we wait for a large-scale unemployment and shutdown of the industry to inspire us to action. A comprehensive industrywide remedy is necessary.

"The outline of such a remedy can be found in the report of the Pastore committee. . ."

But rather than pursue the Pastore recommendations, the four-month-old Kennedy Administration has done just the opposite. In its only *positive* action to date, the Administration has widened rather than eliminated the differential in raw cotton costs between domestic and foreign mills. This Secretary of Agriculture Orville Freeman did on February 21 when he announced the increase in the support price of cotton from 75 to 82% of parity, and an increase in the export cotton subsidy from 6 to 8½ cents a pound.

So what's there to cheer about?

### President Kennedy's Seven Point Program

*First.* I have directed the Department of Commerce to launch an expanded program of research, covering new products, processes, and markets. This should be done in co-operation with both union and management.

*Second.* I have asked the Treasury Department to review existing depreciation allowances on textile machinery. Revision of these allowances, together with adoption of the investment incentive credit proposals contained in my message to the Congress of April 20, 1961, should assist in the modernization of the industry.

*Third.* I have directed the Small Business Association to assist the cotton textile industry to obtain the necessary financing for modernization of its equipment.

*Fourth.* I have directed the Department of Agriculture to explore and make recommendations to eliminate or offset the cost to U. S. mills of the adverse differential in raw cotton costs between domestic and foreign textile producers.

*Fifth.* I will shortly send to the Congress a proposal to permit industries seriously injured or threatened with serious injury as a result of increased imports to be eligible for assistance from the Federal Government.

*Sixth.* I have directed the Department of State to arrange for calling an early conference of the principal textile exporting and importing countries. This conference will seek an international understanding which will provide a basis for trade that will avoid undue disruption of established industries.

*Seventh.* In addition to this program, an application by the textile industry for action under existing statutes, such as the escape clause or the national security provision of the Trade Agreements Extension Act, will be carefully considered on its merits.

# Index to Advertisers



# Textile Bulletin Board

# Textile Bulletin Board

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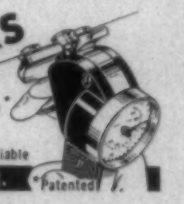

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VOL. 87 JUNE 1961 NO. 6

# This issue of TEXTILE BULLETIN . . .

## . . . features



## . . . and includes



S.R.R.L. conference, Page 37

**Textile Import Totals**

| | Millions of Sq. Yds. 1948 | 1958 | 1960 | % Increase 1958-60 | % Increase 1948-60 |
|---|---|---|---|---|---|
| Cotton Mfrs. | 64 | 456 | 1,008 | 121% | 1,475% |
| Wool Mfrs. | 26 | 55 | 111 | 102 | 327 |
| Wilton & Velvet Carpets | 1 | 5 | 8 | 60 | 700 |
| Man-Made Fiber Mfrs. | 8 | 49 | 100 | 104 | 900 |
| Silk Mfrs. | 32 | 65 | 83 | 28 | 159 |
| TOTAL | 131 | 630 | 1,310 | 108% | 900% |

A good year for importers, Page 41

A report from the S.T.A., Page 56

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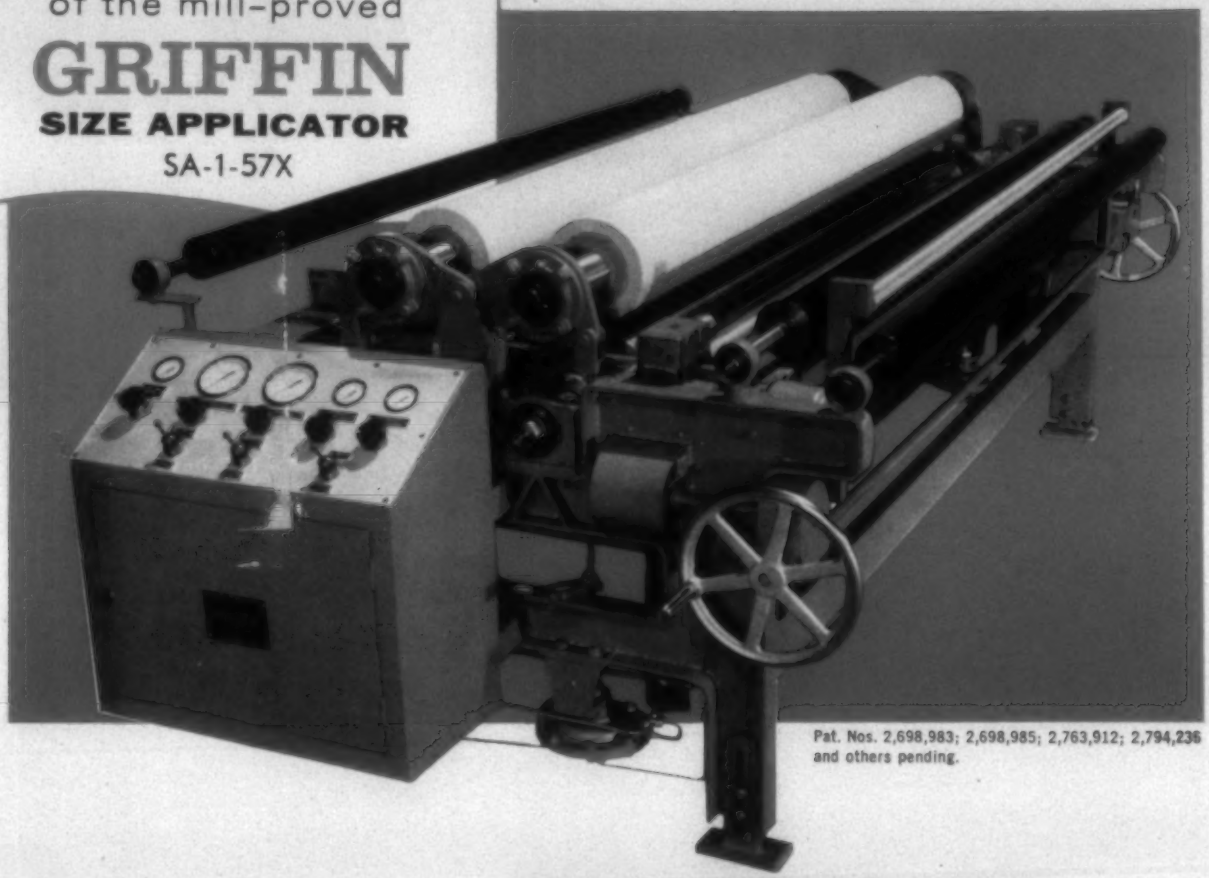

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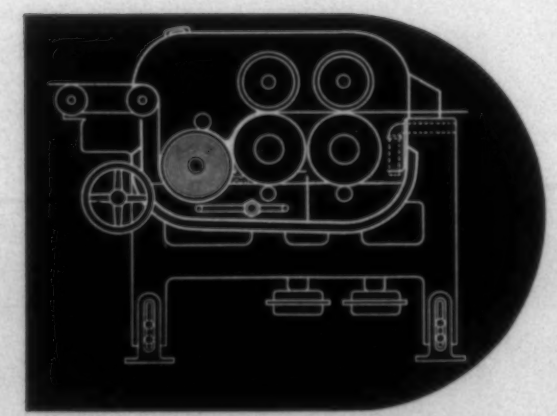

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